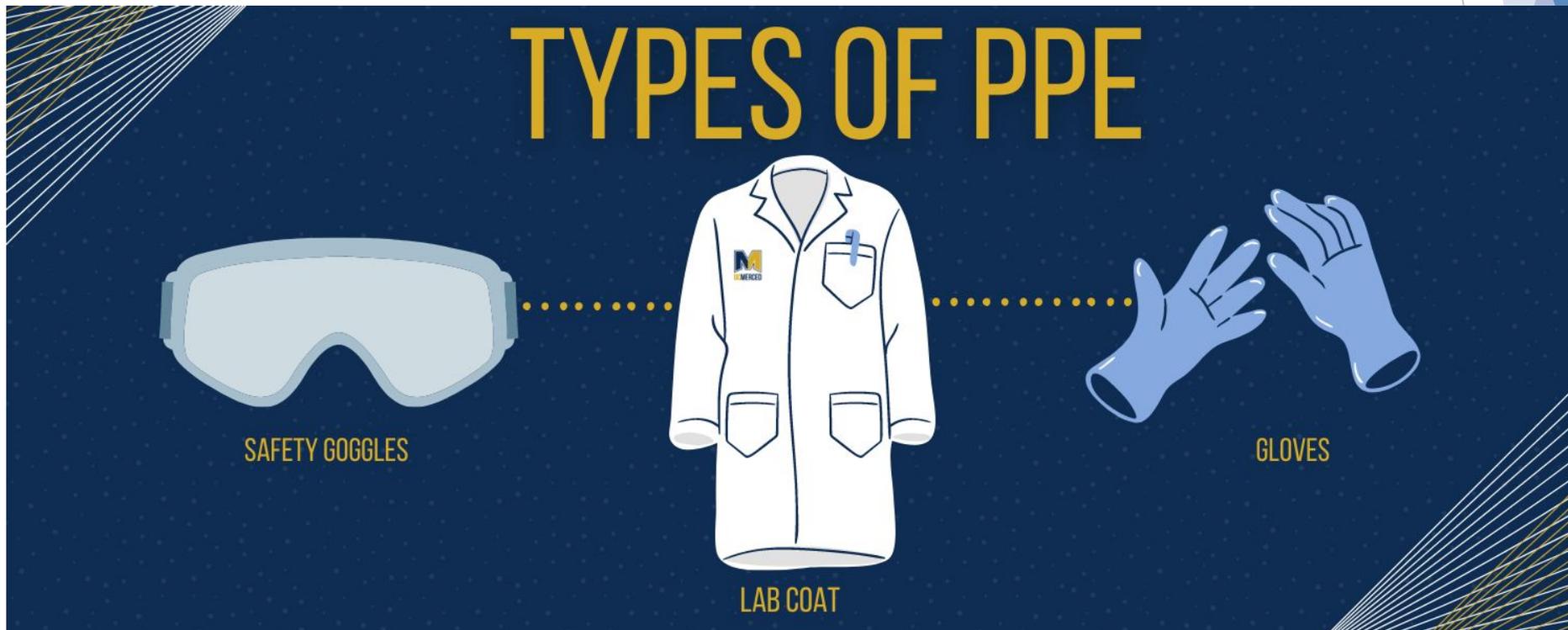


Saint Louis University Personal Protective Equipment (PPE)



What is PPE?



- Clothing or equipment designed to reduce employee exposure to chemical, biological, and physical hazards.
- Often the last line of defense for prevention of occupational injuries, illnesses, and fatalities.
- Should be combined with other control measures to ensure a safe and healthy environment.
- Protects employees when engineering and administrative controls are not feasible or when they fail.



Basic PPE



Safety Goggles or Glasses

Lab Coat

Gloves

Long Pants

Closed-toe Shoes

Why is PPE Important?

- PPE protects your body from:

- Cuts
- Lab-acquired infections
- Chemical burns
- Damaged vision
- Broken bones
- Sprains
- Lost limbs



- These illnesses or injuries could cause acute or chronic symptoms, and could be life threatening.



Dermal Contact



Slips/trips/falls



Chemical Splash



Eye Protection



- Eye protection including safety glasses, face shields, and goggles should always be worn when working in the laboratory to protect your eyes from chemical splashes, cuts, and debris.
- If you wear prescription glasses, make sure to put safety glasses or goggles over them, or have your prescription glasses customized into safety glasses after approval from your eye doctor.



Lab Coats

- Lab coats help protect you and your clothing from spills, contact, chemical absorption, burns, and cross-contamination.
- Lab coats must be laundered in-house and should never be taken home!
- Lab coats could be contaminated and should not be worn in clean areas (e.g., lunch rooms).
- All students and staff need to wear a lab coat in the lab when:
 - Handling biological, chemical, or radiological materials
 - Handling blood tissue, cell lines, clinical specimens, or other potentially infectious materials or waste

Gloves

- Wear gloves that are appropriate for the materials in use.
 - Nitrile - for most chemicals, toxins, and biologics.
 - Latex - for most applications, less resistant to chemicals than nitrile.
Note: some individuals have latex allergies precluding their use.
 - Cryogenic gloves - for handling objects in extreme (low) temperatures.
 - Vinyl gloves - not appropriate for most laboratory tasks!
- Gloves should not be worn outside of the laboratory (e.g., hallways, elevators, corridors). **No such thing as “one glove rule”.**
- Change gloves often. Disposable gloves are not meant for indefinite use or re-use!
- Change gloves immediately after rips, tears, or contamination with chemicals, radionuclides, or biological agents!

Respiratory Protection

- Used to protect against the inhalation of vapors, gases, dusts, mists, respiratory pathogens, or other particulates.
- Respirators are recommended and used based on the hazard.
- Contact EHS for consultation on respirator selection.
- Medical clearance is required for individuals using respirators.
- Respiratory fit testing is required for N-95 and tight fitting respirators.



Types of Respirators

Disposable

- Filters out particles (dust, mists, fumes)
- Does NOT protect against gases or vapors
- Includes N95 masks



Half-Face

- Covers nose and mouth to protect against gases, vapors, and particles
- Use appropriate cartridge or filter
- Reusable



Full-Face

- Covers face and eyes to protect against gases, vapors, and particles
- Use appropriate cartridge or filter
- Reusable



Powered Air Purifying Respirator (PAPR)

- Circulates filtered air into contained headgear
- HEPA filtered



Foot Protection

- Shoes which completely cover the foot must be worn in the laboratory at all times.
 - No sandals, flip flops, or slides!
 - No crocs with holes!
 - No flats, heels, or other shoes that expose the top of the foot!
- Shoe covers may be necessary in certain areas to prevent cross-contamination.
- Work-appropriate shoes can also protect you from physical hazards, spills, or splashes.

Appropriate Lab Attire

Allowed	Not Allowed	Explanation
Long pants	Shorts, capris, or skirts	Chemicals splash up after they hit the floor; shattered glass bounces up and can inflict injury on unprotected skin.
Shirts/tops that cover upper torso	Cropped shirts	Clothing covering the entire upper torso provides a layer of protection against spills and splashes.
Completely enclosed shoes that cover the instep of the foot	Sandals, open toe, open back, shoes with holes in the top or sides.	Shoes need to protect the wearer from chemicals, hot liquids, and shattered glass. Cloth shoes can absorb chemicals and hold them against the skin.

Work-Specific PPE

Chemicals/Radioactive materials:

- Lab coat, gloves, eye protection, and appropriate shoes

Cryogenic liquids:

- Cryogenic gloves to protect hands
- Safety glasses, goggles, face shield to prevent splashes into eyes
 - Materials can rapidly expand after removal from deep temperatures and may cause tubes to explode unexpectedly!

Pathogens:

- BSL3 and Select Agent facilities may require use of coveralls, double layers of gown/shoe covers/gloves, and respiratory protection (N95 face masks or Powered Air Purifying Respirators (PAPR))
 - Personnel should should consult their biosafety protocols.

Common PPE Violations

- Glove use outside of the lab
- Not wearing safety glasses
- Not wearing a lab coat
- Reusing gloves
- Wearing open toed shoes





PROPER DRESS AND PPE



Help Us Keep Everyone Safe!

Remind those that are not wearing appropriate PPE to please do so, for everyone's sake!

Report safety concerns to:

- Lab Supervisors
- Principal Investigators
- Building Managers
- EHS

Please note: Principal Investigators are responsible for providing PPE and ensuring appropriate use.