

Personal Protective Equipment (PPE)

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Overview

1. Awareness about the requirements for personal protective equipment (PPE) in the workplace
2. Understand the considerations for job hazard analysis for PPE
3. Understand the considerations for determining the need for PPE, how to select PPE, and advantages and limitations of commonly used PPE
4. Apply your knowledge in review of Accident/Injury reports and in your workplace.

Requirements For Personal Protective Equipment (PPE)

Washington Administrative Code (WAC) 206-800-160

- > Employer responsibility: To make sure that your employees have, use, and care for the appropriate personal protective equipment (PPE).
- > PPE is an item or items used to protect the eyes, face, head, body, arms, hands, legs, and feet such as goggles, helmets, head covers, gloves, rubber slickers, disposable coveralls, safety shoes, protective shields, and barriers.

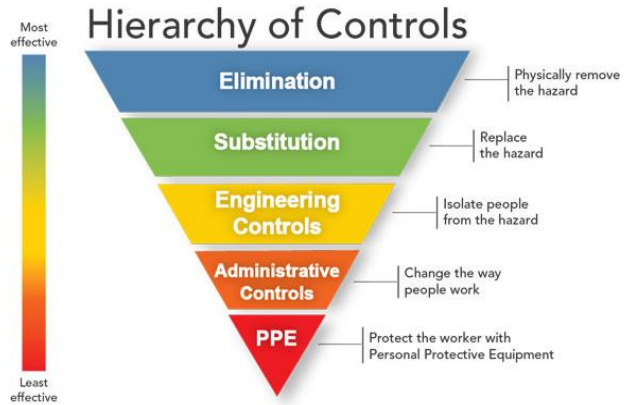
Requirements for PPE

WAC 206-800-160

- > Departmental Responsibilities
 - Assess the workplace for hazards
 - Select appropriate PPE
 - Ensure PPE is used
 - Establish inspection, maintenance, and replacement procedures for PPE
 - Document assessment, selection, and training

When is PPE Needed?

- > CDC (Centers for Disease Control) Hierarchy of controls



Hazard Assessment for PPE

Performing a Hazard Assessment

- > Break job down into tasks or activities
- > Analyze each step of task or activity to determine possible hazards and risk
 - Ask yourself, “What could go wrong during this task”
- > Determine if PPE could protect employee from the potential hazards
 - First consider engineering, workplace, and/or administrative controls



EYES		
Work activities, such as: <input type="checkbox"/> abrasive blasting <input type="checkbox"/> chopping <input type="checkbox"/> cutting <input type="checkbox"/> drilling <input checked="" type="checkbox"/> welding <input type="checkbox"/> punch press operations <input type="checkbox"/> other: _____	<input type="checkbox"/> sanding <input type="checkbox"/> sawing <input type="checkbox"/> grinding <input type="checkbox"/> hammering	Work-related exposure to: <input type="checkbox"/> airborne dust <input checked="" type="checkbox"/> flying particles <input type="checkbox"/> blood splashes <input type="checkbox"/> hazardous liquid chemicals <input checked="" type="checkbox"/> intense light <input type="checkbox"/> other: _____
		Can hazard be eliminated without the use of PPE? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If no, use: <input type="checkbox"/> Safety glasses <input type="checkbox"/> Safety goggles <input type="checkbox"/> Shading/Filter (# _____) <input checked="" type="checkbox"/> Welding shield <input type="checkbox"/> Other: _____
		<input type="checkbox"/> Side shields <input type="checkbox"/> Dust-tight goggles

Hazard Assessment for PPE

Document your Hazard Assessment for PPE

PPE Hazard Assessment Certification Form			
*Name of work place: _____		*Assessment conducted by: _____	
*Work place address: _____		*Date of assessment: _____	
Work area(s): _____		Job/Task(s): _____	
*Required for certifying the hazard assessment. Use a separate sheet for each job/task or work area			
EYES			
Work activities, such as:		Work-related exposure to:	Can hazard be eliminated without the use of PPE?
<input type="checkbox"/> abrasive blasting	<input type="checkbox"/> sanding	<input type="checkbox"/> airborne dust	Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> chopping	<input type="checkbox"/> sawing	<input type="checkbox"/> flying particles	If no use:
<input type="checkbox"/> cutting	<input type="checkbox"/> grinding	<input type="checkbox"/> blood splashes	<input type="checkbox"/> Safety glasses
<input type="checkbox"/> drilling	<input type="checkbox"/> hammering	<input type="checkbox"/> hazardous liquid chemicals	<input type="checkbox"/> Side shields

PPE Training

Train employees to use PPE

- > Communicate PPE selection decision
- > Employees must know
 - When and what PPE is needed
 - How to put it on and take it off
 - How to care for the PPE
 - Limitations of PPE



Document training and re-train as needed.

EH&S Resources


PPE Selection Guide for Shops

Section 1. PHYSICAL HAZARD PROTECTION				
<input checked="" type="checkbox"/> Minimum PPE				
Eyes: Safety Glasses		Hands: None, dependent upon the task		Body: Long sleeves with tight fitting cuffs, long pants, or equivalent leg covering (no loose clothing); Shop footwear (no open toed shoes).
(√) If Perform Task	Task Description (Modify wording to fit your needs)	Potential Hazards	PPE Designated For Shop Specific Tasks	Notes
	Rotating equipment	Injury from being struck. Getting caught in moving parts.	<input type="checkbox"/> Minimum PPE	Restrain hair, remove jewelry and no loose clothing.
	Saws and Cutting Equipment	Cuts, lacerations, amputations	<input type="checkbox"/> Minimum PPE	Restrain hair, remove jewelry and no loose clothing.
	Working with compressed gases.	Asphyxiation. Toxic gas exposure.	<input type="checkbox"/> Minimum PPE	Take special precautions in unventilated spaces.

EH&S Resources

PPE Selection Guide for Laboratories

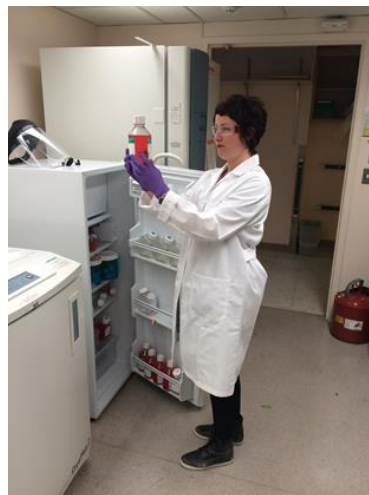
LABORATORY PPE HAZARD ASSESSMENT

 1.0 CHEMICAL HANDLING PROTECTION (Page 1 of 5)			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE Designated For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	C1. Working with solids of low or moderate toxicity.	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat, Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	C2. Working with small volumes (<100 ml.) of corrosive (acids or caustics) liquids or solids.	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat, Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).
<input type="checkbox"/> <input type="checkbox"/>	C3. Working with large volumes of corrosive (acids or caustics) or acutely toxic materials that may splash.	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Face: If splash or splatter may occur – Face shield ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat, Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Body: Chemical resistant apron. <input type="checkbox"/> Inhalation: Respiratory protection. Contact EH&S for respiratory protection program assistance. <input type="checkbox"/> Other PPE, Specify:

Minimum PPE: Labs

EH&S Minimum PPE

- > EH&S determined minimum PPE our staff will wear in laboratories
 - Lab coat
 - Safety glasses
 - Gloves as needed



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Gloves: Examples

Select the Appropriate Type for the Task

Patient/Dental Care	Laboratory	Trades	Chemical
 Nitrile, Exam Glove	 Exam Glove, Latex	 Cut Resistant	 Solvent Cleaning
 Nitrile, Exam Glove, Long Cuff	 Nitrile, Exam Glove	 Electrical Glove	 Solvent Cleaning
 Nitrile, Exam Glove, Tested Against Chemotherapy	 Cryogen Glove, Liquid Nitrogen	 Welder's Glove	 Chemical Spill Cleanup

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Eye Protection: Examples

Select the Appropriate Type for the Task

Safety Glasses		Safety Goggles		Faceshield	
Standard		Standard		Disposable, Splash	
Black Plastic, Wraparound		Wraparound		Impact Resistant	
Clear Plastic, Wraparound		Wraparound		Impact Resistant, Neck and Chin Protection	
Wraparound, With Adjustments				Impact Resistant, With Head Protection	
Safety Glasses, Over Prescription Glasses					

Lab Coats:

Select the Appropriate Type for the Task

Composition	Advantages	Disadvantages
Nomex	<ul style="list-style-type: none"> Highest level of fire protection Resistant to tearing Resistant to most acids, caustics, and solvents 	<ul style="list-style-type: none"> Heavy weight so may be warm to wear Decomposes with bleach
Fire-Resistant Cotton	<ul style="list-style-type: none"> Treated with fire-resistant material 	<ul style="list-style-type: none"> Fire resistance dissipates with laundering
100% Cotton	<ul style="list-style-type: none"> Moderate fire resistance Generally preferred for comfort 	
100% Polyester, Polyester/Cotton Blend	<ul style="list-style-type: none"> Resistant to blood and body fluids and chemical splashes Used in patient care settings and labs that handle biohazardous agents 	<ul style="list-style-type: none"> Do not use around flames, potentially flammable mixtures, or other fire hazards
Disposable	<ul style="list-style-type: none"> Resistant to blood and body fluids and chemical splashes Used in patient care settings and labs that handle biohazardous agents 	<ul style="list-style-type: none"> Do not use around flames, potentially flammable mixtures, or other fire hazard

Hearing Protection: Examples

Select the Appropriate Type for the Task

Ear Plugs					Ear Muffs
					
Disposable					
					
Reusable					
					
Molded, Reusable					

Respirators:

Select the Appropriate Type for the Task

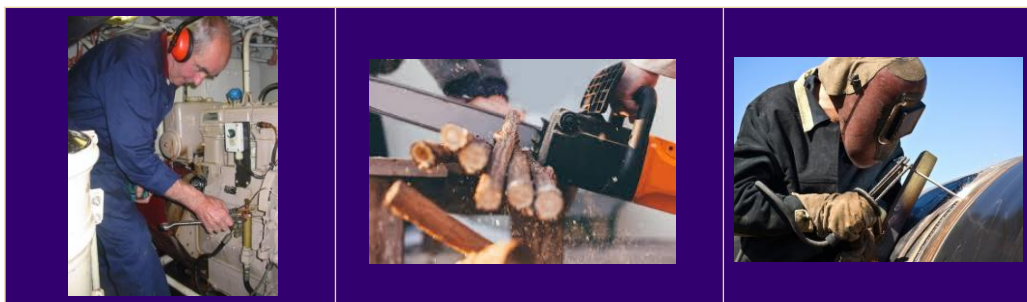
Surgical Mask (Not a Respirator)	N95 Disposable Respirator	Powered Air Purifying Respirator (PAPR)	Half face Cartridge Respirator	Full face Respirator
				
				

What is the Exposure? Which PPE Should be Worn?



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What is the Worker Exposed to? What PPE should the worker wear for protection?



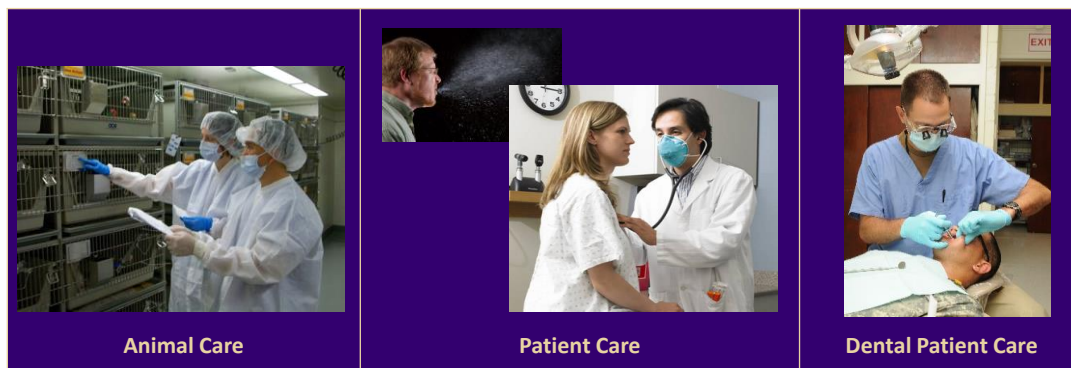
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What is the Exposure? Which PPE Should be Worn?



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What is the Exposure? Which PPE Should be Worn?



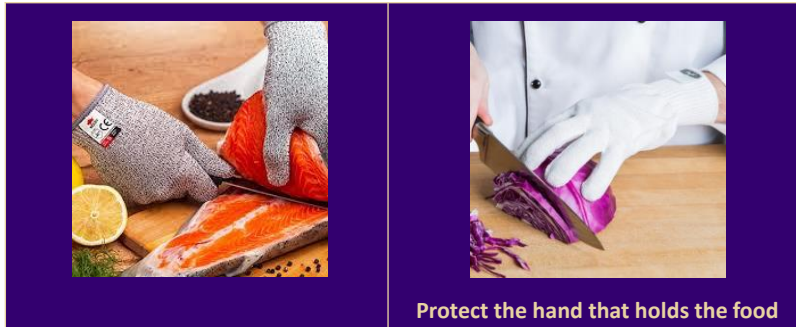
Animal Care

Patient Care

Dental Patient Care

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What is the Exposure? Which PPE Should be Worn?



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B-E S-A-F-E

When accidents occur, the Supervisor conducts an accident investigation.

The Supervisor oftentimes reports that he/she reminded, retrained, or trained the employee to “Be Safe”.

We agree that the Supervisor should require all employees to **B-E S-A-F-E**.

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B-E

B: Determine the BEST PRACTICE for a safe outcome including:

- BEST work procedure
- BEST equipment, tool, instrument, and device
- BEST personal protective equipment
- BEST training for a safe outcome

E: EVALUATE your Work Environment

- Conduct a hazard assessment and self inspections
- Take action to correct hazards and minimize exposures

S-A-F-E

S: SET UP your work to follow BEST PRACTICE to manage hazards and exposures.

A: ACT – Follow BEST PRACTICE. If you are not sure - ASK.

F: FINISH your work. Clean up the work area.

- Proper housekeeping
- Store equipment and supplies in designated locations
- Dispose of trash/waste properly

E: EMERGENCIES do happen and should be anticipated.

- Have an emergency procedure to follow when the unintended or unplanned occurs.

Thank You
and
B-E S-A-F-E



Resources

Additional EH&S Resources

- > EH&S:
 - PPE Website: <http://www.ehs.washington.edu/rbsresplan/ppe.shtm>
 - Industrial Hygienists: 206-543-7388 for assistance with identifying possible engineering, administrative controls, or PPE
 - Shop Safety PPE Assessment: <http://www.ehs.washington.edu/fsophyssafe/shops.shtm#m>

- > WA Labor & Industries: Job Hazard Analysis and PPE Selection (templates)
 - <http://www.lni.wa.gov/Safety/Topics/AtoZ/ppe/resources.asp>

