

# Personal Protective Equipment: Safety While Wearing PPE



The use of personal protective equipment (PPE) will be needed to protect responders from infectious agents or chemical hazards. However the use of PPE can raise various safety concerns for the personnel wearing it. To ensure personal safety while wearing PPE, certain safety precautions should be followed.

## Safety Concerns While Wearing PPE

- **Physical Constraints**
  - Restricts movement
  - Limits mobility
  - Increased energy/fatigue
  - Reduced dexterity
  - Reduced sensory perception
    - Vision
    - Hearing
    - Communication
- **Physiological Issues**
  - Allergic reactions
  - Responder physical condition
  - Level of acclimation
- **Psychological Stress**
  - Confining
  - Claustrophobic
- **Environmental Factors**
  - Heat-related illness
    - Heat Stress
    - Heat Exhaustion
    - Heat Stroke
  - Cold-related illness
    - Hypothermia
    - Frostbite
  - Site conditions
    - Rain and mud
    - Ice and snow
    - Uneven surfaces
- **Biological Concerns**
  - Zoonotic diseases
  - Integrity of PPE
    - Breakdown of materials
    - Breach of barriers
  - Pathogen exposure

## Safety Precautions

- **PPE Safety Training**
  - What PPE is needed
  - Why it is needed
  - Appropriate use
  - Limitations
  - Precautions
  - Consequences
  - Recognize/detect damaged or improperly functioning PPE
  - Decontamination, repair, replacement
- **Use the Buddy System**
  - Partner to assist and observe for signs of distress, injury, as well as PPE integrity
  - Stay in close visual contact
  - Obtain emergency assistance if needed
- **Personal Preventive Actions**
  - Remain alert for hazards in environment
    - Hoses, cables, slippery surfaces
    - Ensure adequate lighting for tasks
    - Identify hazardous areas; warn others
  - Monitor yourself and other responders for signs of physical, environmental (heat or cold), or psychological stress
  - Know your limitations; do not overexert yourself
  - Practice stress-management techniques
    - Will help to remain calm, focused, analytical under adverse conditions

## Additional Resources

USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Personal Protective Equipment and Health and Safety  
[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/nahems\\_guidelines/fadprep\\_nahems\\_guidelines\\_health\\_safety\\_final\\_16may2011.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/nahems_guidelines/fadprep_nahems_guidelines_health_safety_final_16may2011.pdf)

Development of this educational material was by the Center for Food Security and Public Health at Iowa State University through funding from the Multi-State Partnership for Security in Agriculture MOU-2011-HSEMD-012. June 2012. Revised July 2014.

