Firehouse.com WEEKLY DRILL

Drill # 37: Personal Protective Equipment – Part 3

Introduction

Let's not get stuck thinking that personal protective equipment (PPE) only covers firefighting. More and more today firefighters are being called to provide emergency medical services (EMS). In my opinion, these types of calls can be more hazardous to firefighters than any of the other type incident we are called to. The clientele that we are dealing with may have any disease known to man; therefore, it is important that we take every precaution to protect not only us, but our families as well.

Universal Precautions and Body Substance Isolation is our PPE when dealing with EMS incidents. Body Substance Isolation (BSI) refers to the practice of avoiding contact with the bodily fluids of the patient you are assisting. BSI should be understood and followed by all employees.

BSI was designed to protect firefighters and paramedics from blood-borne diseases. When we first started using BSI, it involved using gloves for anticipated contact with blood and certain body fluids. Over the years, we have added some additional items to further protect against these diseases.

- Gloves must be worn for anticipated contact with blood and body fluids or contaminated items with mucous membranes or non-intact skin.
- Gowns, Tyvek suits or aprons should be used anytime clothing is likely to be soiled with blood, body fluids or other moist body substances.
- Masks and protective goggles or safety glasses should be worn whenever splattering is likely to occur, such as in wound irrigations, suctioning and intubation of a patient.
- Tuberculosis (TB) masks should be used any time an active case of TB is known or suspected

Occupational Safety and Health Administration (OSHA) requires that we conduct training annually on Blood-Borne Pathogens (BBP) and the Right to Know (RTK) laws. Additionally, we should have a Hazardous Communication Standard in our departments that should be reviewed as well.

The fire service is very unique in that we also respond to a variety of Special Operations type incidents. Here

the dangers are just as great and firefighters need to be thoroughly protected.

Hazardous Materials incidents are one where the firefighters have three levels of PPE to choose from. The level "C" ensemble, which is a slash suit and respirator, would be used for a known chemical that has a specified canister to filter the contaminate chemical. The drawback here is that oxygen content has to be in the right percentages to breath.

A level "B" ensemble would still use the splash suit, however, in this case the canister filter would not be allowed for one of two reasons. First, the air quality is poor and would not be able to sustain life. Or secondly, there is not a compatible canister filter for the known chemical. In this case, the self-contained breathing apparatus (SCBA) would be worn with the splash suit. Depending on the manufacturer and style of suit, the SCBA could be worn on either the outside of the suit or on the inside.

The last level of protection would be that of level "A." This gives the wearer the most protection. Level A is a fully encapsulating chemical suit and not only protects the firefighter wearing it, but will also protects the SCBA, as it is worn on the inside of the suit.

Some departments conduct additional specialty operations tasks in which proper PPE would be required. If your department is involved with any of these other specialties, be sure you understand the correct PPE that needs to be worn while performing these tasks.

–Prepared by Russell Merrick