

# **Body Substance Isolation**

## **AND UNIVERSAL PRECAUTIONS TRAINING**

# PERSONAL PROTECTIVE EQUIPMENT

- Blocks entry of an organism into the body
  - Gloves are most common
- Make sure all first aid kits contain several pairs of vinyl, laytex, or Nitrile gloves
- Protective eyewear, standard surgical masks, and/or respirators may be necessary
- Mouth to barrier (breathing masks) are also recommended

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

- No case of disease transmission to a rescuer as a result of performing unprotected CPR in an infected victim has been documented (only 15 cases of infection reported in last 30 years!) . However, mouth to barrier devices are still **strongly recommended!**

# UNIVERSAL PRECAUTIONS

- Individuals infected with Hepatitis B Virus (HBV) or HIV may not show symptoms and may not even know they are infectious.
- All human blood and body fluids should be considered infectious, and precautions should be taken to avoid contact.

# UNIVERSAL PRECAUTIONS

- The Body Substance Isolation (BSI) technique assumes that all body fluids are a potential risk.
- Follow BSI procedures even when blood and/or body fluids are not visible

# UNIVERSAL PRECAUTIONS

- Wear appropriate PPE, such as gloves
- Use absorbent barriers to soak up blood or other infectious materials
- Clean the spill area with an appropriate disinfecting solution, such as bleach
- Discard contaminated materials in an appropriate waste disposal container

# UNIVERSAL PRECAUTIONS

- If you have been exposed to blood or body fluids:
- Use soap and water to wash the parts of your body that have been contaminated
- If exposure happens at work, report the incident to your supervisor
- OR contact your physician (non work related)

# AIRBORNE DISEASE

- Bacteria or viruses are introduced into the air by coughing or sneezing
- Carried by droplets of mucus
- Can be inhaled by other individuals
- TB (tuberculosis) infection rate has been increasing in recent years - it settles in the lungs and can be fatal



# AIDS/HIV

- APPROXIMATELY 900,000 CASES REPORTED TO CDC (total)
  - Approximately 100+ Health Care Workers
- Virus is Very Fragile Outside Host and Dies in a Few to Several Minutes
- No known Cure - Almost Always Fatal

# Hepatitis B Virus

- APPROXIMATELY 300,000 NEW CASES ANNUALLY
  - 8,000-9,000 Health Care Workers
- HBV Has Been Documented to Survive Two Weeks in Dried Blood
- Can Be Vaccinated for HBV
- May Not Express Outward Symptoms
- May Carry Disease for Life

# OTHER DISEASES

- Herpes
- HCV...HHV.
- Influenza
- Infectious mononucleosis
- Microbacterium tuberculosis
- ??????

# DECONTAMINATION

- “The use of physical or chemical means to remove, inactivate, or destroy blood borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.”

# DECONTAMINATION CHEMICALS

- Not recommended for decontamination of possible AIDS/HIV, HBV and Herpes exposures:
  - Alcohols, quaternary ammonium compounds, phenolics
- Recommended:
  - sodium hypochlorate solution having at least 500 ppm free available chlorine (1/4 cup liquid household bleach per gallon of tap water.
  - Iodine, formaldehyde, glutaraldehyde (may cause toxic fumes in certain circumstances)

# DECONTAMINATION METHODS

- ALWAYS wear gloves, face shields, protective smocks, etc. as indicated by the hazard(s) involved
- REMEMBER blood or other body fluids may be present even when you don't see it
- Use a strong bleach solution to wash down contaminated areas
- Keep surfaces wet with decontamination fluids for at least 10 minutes.

# WHO IS CONTAMINATED OR INFECTED?

- You can not determine who does and who does not pose a bacterial or viral threat just by looking at them
- People from all walks of life, socio-economic backgrounds and races are contaminated with diseases like AIDS, HBV, Herpes, etc.
- Some do not even exhibit any outward signs of the disease they carry.
- Some do not even know they are infectious or carry a serious disease

# **WILL I BE CONTAMINATED BY:**

- Working with someone who is infected with AIDS or HBV? **NO!** as long as you are not in contact with body fluids, there is no known transmission through casual contact.
- If I come in contact with blood, vaginal secretions, semen, etc. **THE POTENTIAL EXISTS IF YOU DO NOT PROTECT YOURSELF!**



# HOW DO I GET CONTAMINATED/EXPOSED?

- To infect you, HBV, Aids, etc. must get inside your body through a break in your skin, or through your eyes, nose, mouth, or other mucous membranes
- Don't forget to decontaminate an exposed work area or tool
- Don't forget to decontaminate your first aid or jump kit after treating a patient!

# HOW DO YOU PROTECT YOURSELF ON THE JOB?

- Universal Precautions
- Scrubbing with soap and water
  - anti bacterial scrubs where soap and water are not readily available - followed by soap and water at earliest convenience
- Careful and thorough decontamination of exposed or suspected exposed surfaces, areas, and tools, etc.