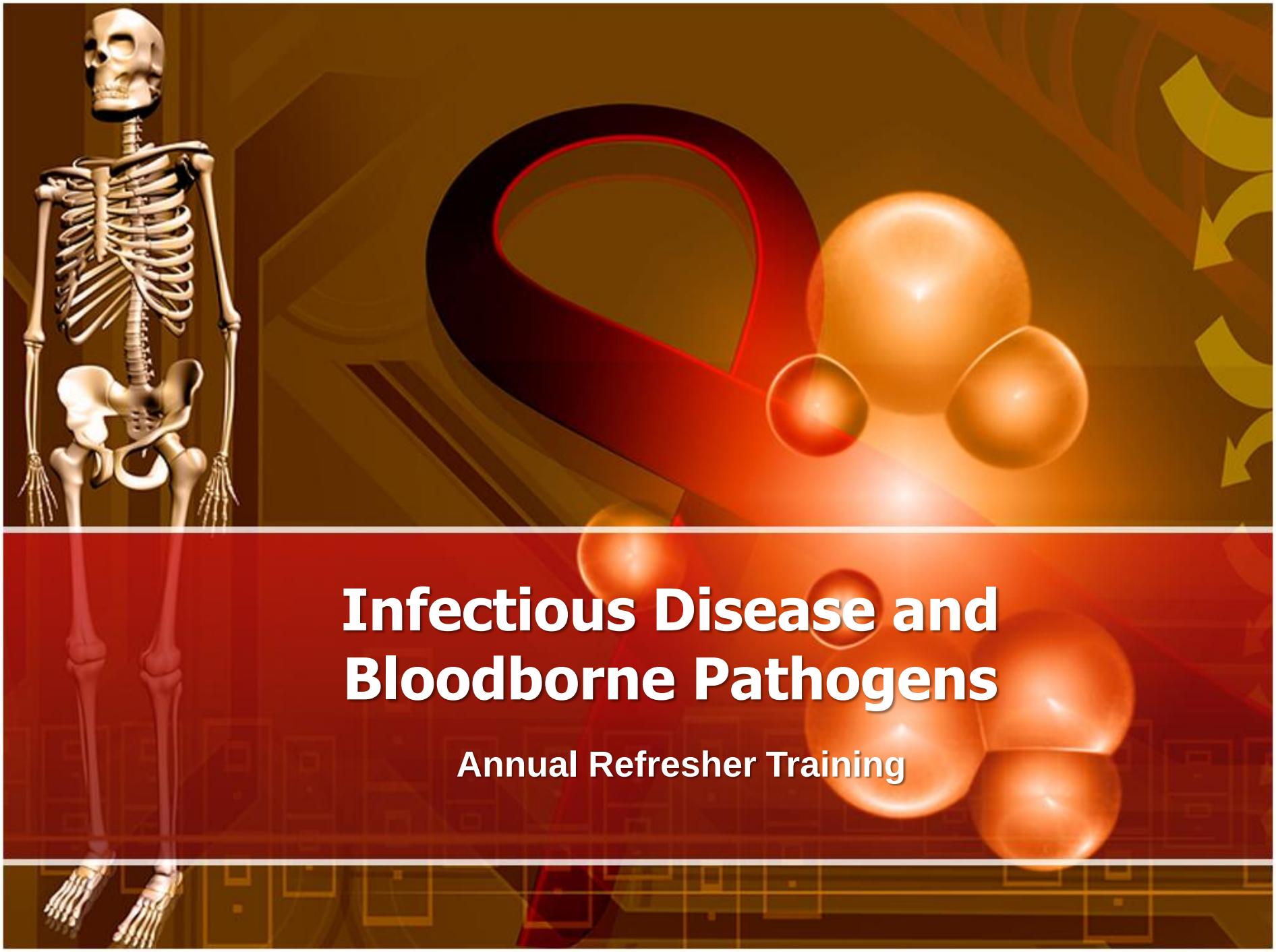
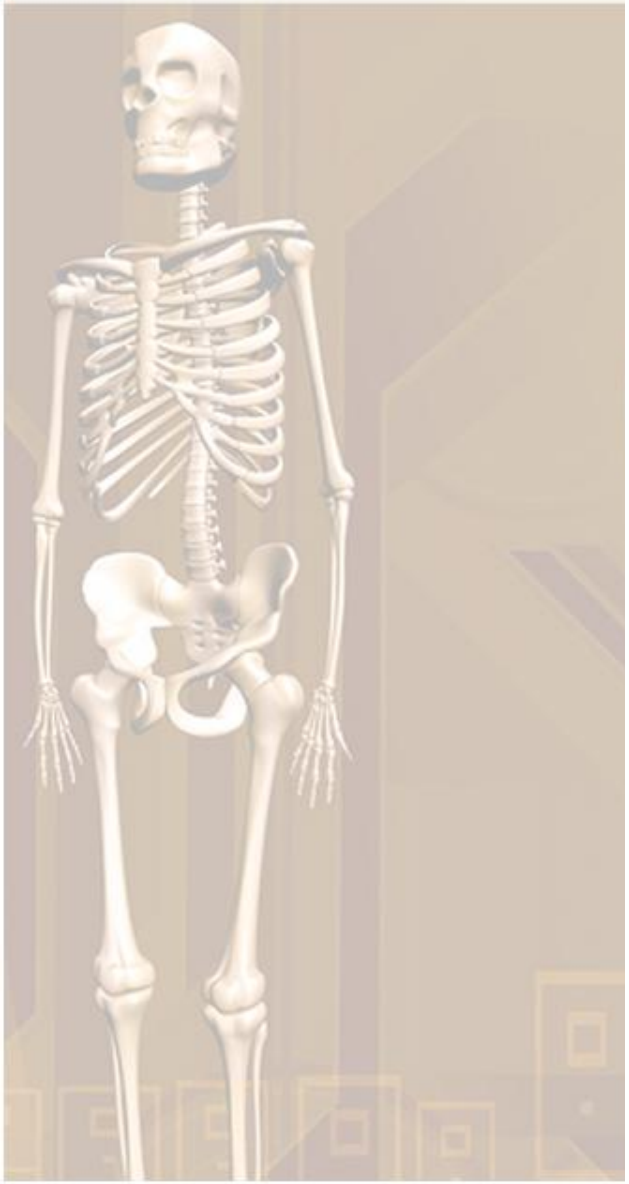


Infectious Disease and Bloodborne Pathogens

Annual Refresher Training

Questions?



Any time throughout the slide show or throughout the school year:

Contact Sue Liebl at IEA

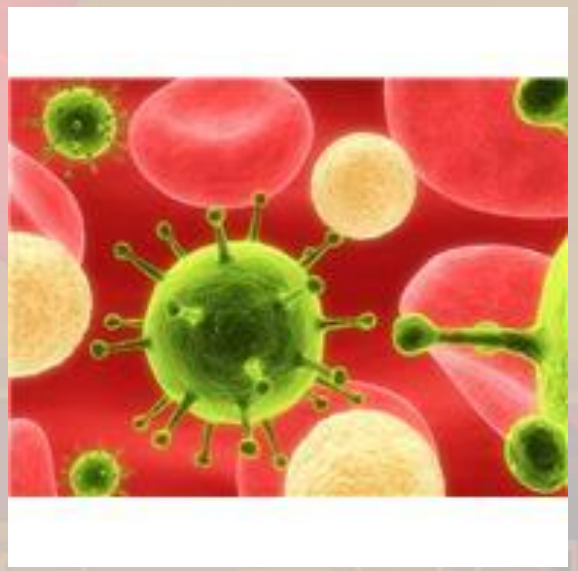
507.345.8818 (office)

Susan.Liebl@ieainstitute.com

Or Cheryl Malecha at 952.758-1760

Infectious Diseases

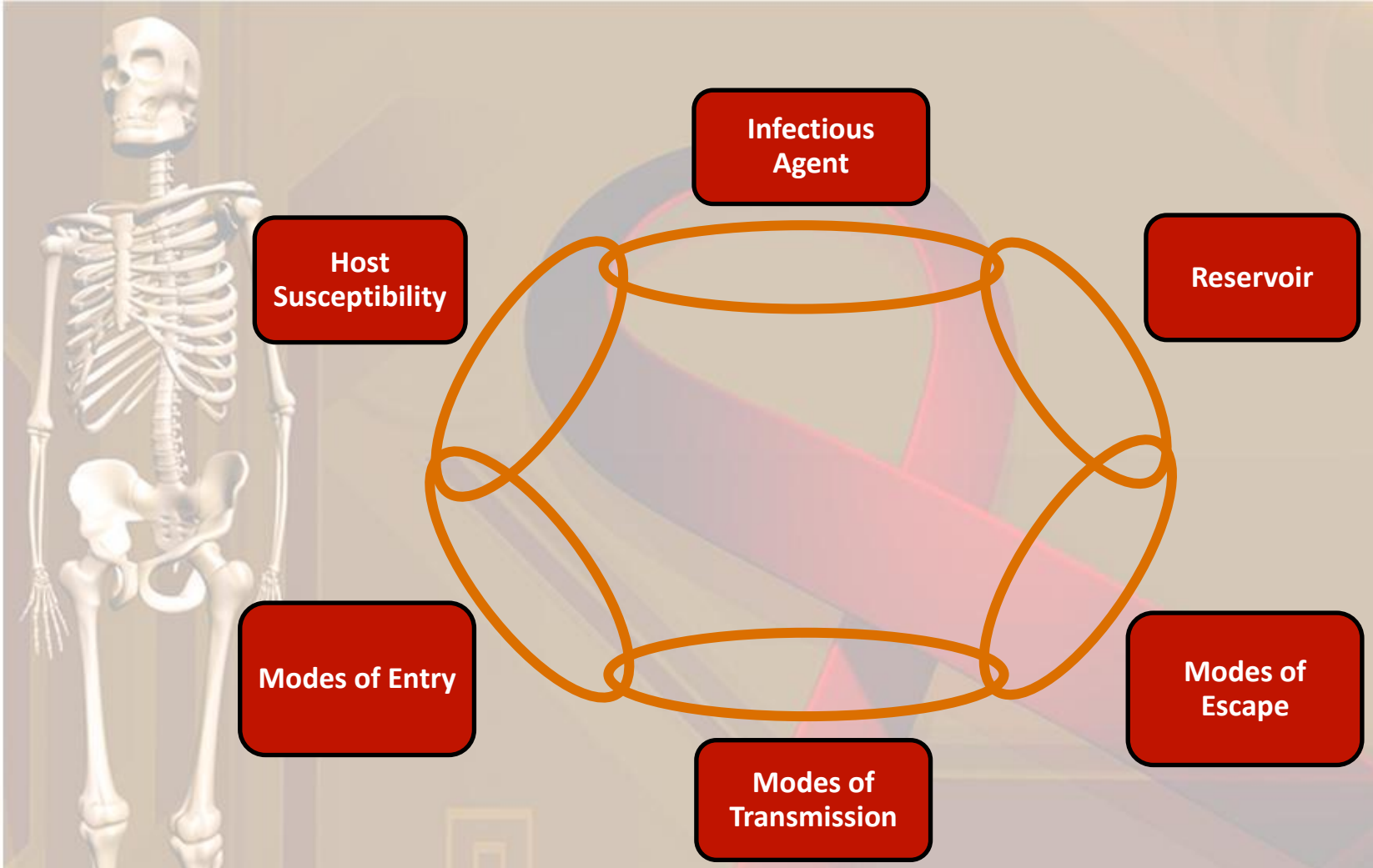
A disease caused by a microorganism or other agent, such as a bacterium, fungus, or virus, that enters the body of an organism



Common Infectious Agents

- Chicken pox (varicella-zoster virus)
- Conjunctivitis (Pink eye)
- Influenza (flu)
- Pertussis (whooping cough)
- MRSA (methicillin-resistant staphylococcus aureus)
- Strep Throat
- Bloodborne Pathogens

The Infection Chain



Definition of Bloodborne Pathogen

- Pathogenic microorganism
- Present in human blood
- Can cause disease in humans

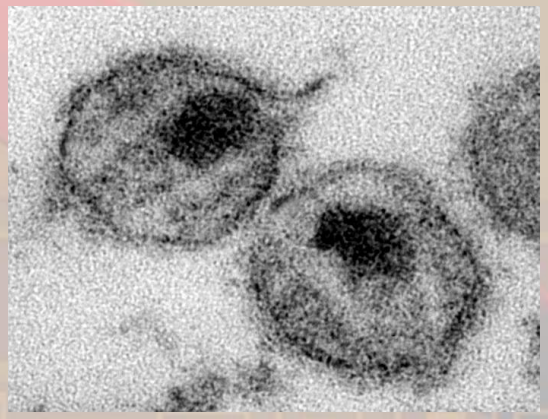
Most common BBPs are:

- Hepatitis B
- Hepatitis C
- HIV

Common Bloodborne Diseases

Human Immunodeficiency Virus (HIV)

- HIV is the virus that causes AIDS. HIV affects the immune system, slowing destroying white blood cells.
- Virus is killed easily outside of body (once blood is dry, HIV considered no longer communicable)

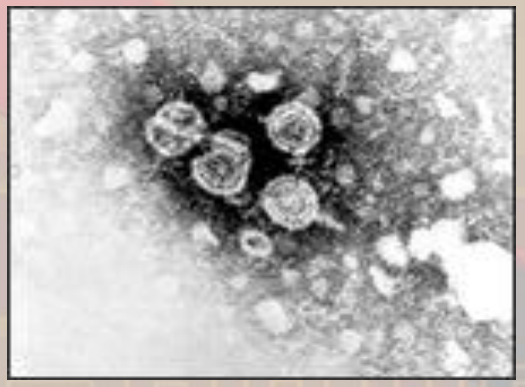


From the Public Health Image Library – Center for Disease Control and Prevention

Common Bloodborne Diseases

Hepatitis B Virus (HBV)

- Attacks liver
- 6-10% of people infected after age 5 become chronic
- Death occurs in 15-25% of chronically infected people
- Can survive for 7-14 days outside the body.
- Vaccine preventable



From the Public Health Image Library – Center for Disease Control and Prevention

Common Bloodborne Diseases

Hepatitis C Virus (HCV)

- Attacks liver
- No vaccine
- 50-55% develop chronic liver disease
- Treatment with interferon but has side effects

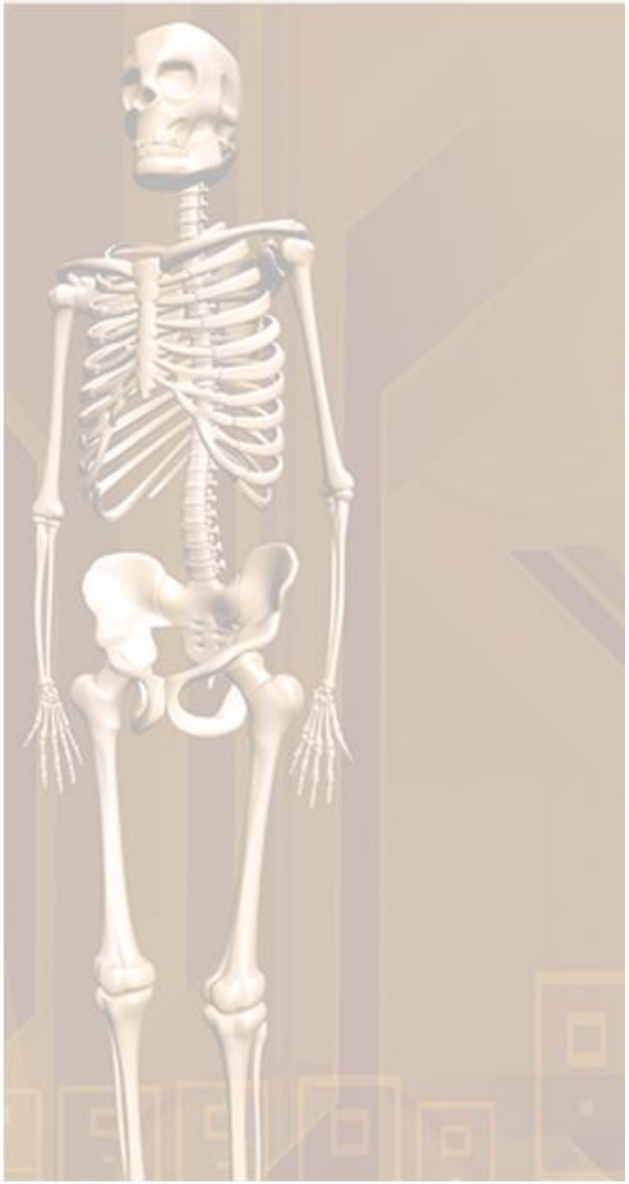
Purpose of OSHA Standard

- To reduce or eliminate occupational exposure to potentially infectious materials which could cause disease or death.
- Designed to protect 5.6 million workers in healthcare and related occupations.

Who Does it Cover?

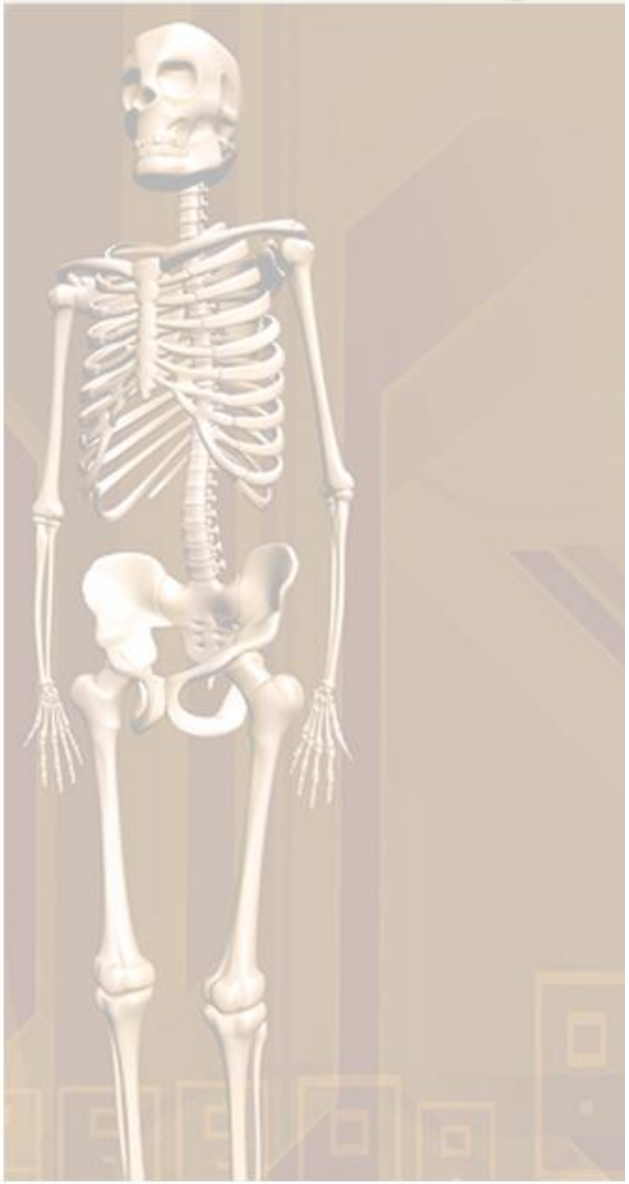
- All employees for whom exposure can be “reasonably anticipated” as part of their normal job duties
- Health care occupation primary focus
- Employer responsible for evaluating potential for exposure
- Excludes Good Samaritan activities

Modes of Transmission



- Sexual contact
- Exposure to another person's blood
  - Contaminated needle sharing
  - **Blood contact with non-intact skin or mucous membranes**
  - Transfusions
- Infected mother to child

BBP Program Requirements



- Evaluation of employee activities
- Develop Exposure Control written plan
- Practice Universal Precautions
- Hepatitis B vaccinations and titers
- Post exposure procedures
- Personal protective equipment
- Training
- Annual review
- Recordkeeping

Exposure Control Written Plan

- A written plan in which potential exposures are listed along with appropriate responses
- The plan is maintained on the District website
- The BBP program coordinator is Cheryl Malecha, Licensed School Nurse/Exposure Control Officer
- Accessible to all employees & OSHA
- Reviewed/updated annually

Common Occupational Transmissions

- Needle-sticks
- Contaminated sharps/glass/ceramics
- Mucous membranes (eyes, nose, mouth)
- Open wound that is exposed to someone else's blood (includes skin rash, dermatitis broken cuticles, cut)

Important to know and discuss job responsibilities prior to start of work!

Universal Precautions

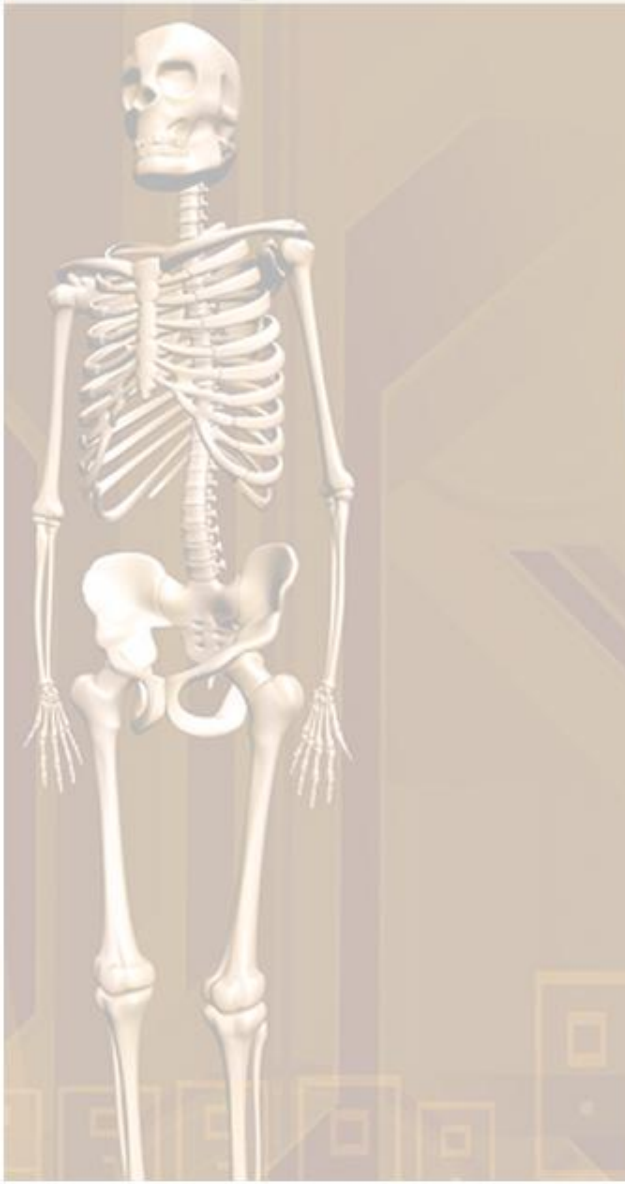
All human blood and certain human body fluids are treated as if known to be infected with HIV, HBV, HCV, and other bloodborne pathogens.

It is your responsibility to treat every student or employee as if they were infected with a BBP, no matter how unbelievable it may seem.

Vaccinations

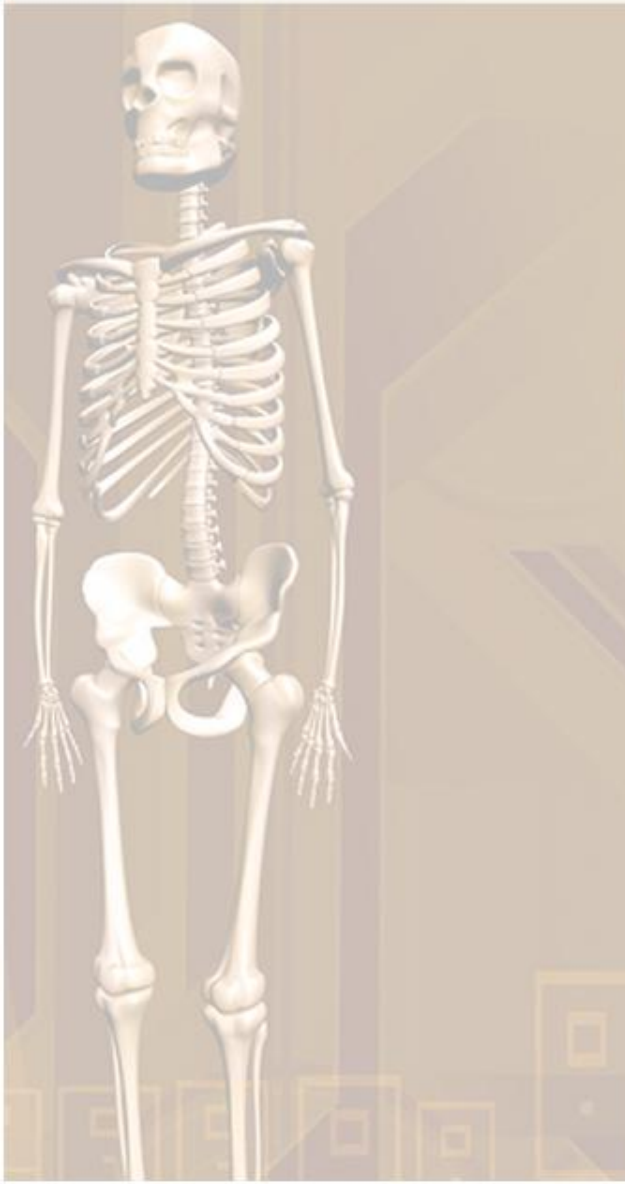
- HIV
  - There is NO vaccine for HIV. Some treatments can improve length of life dramatically.
- Hepatitis B Virus
  - The HBV vaccination is administered in a series of 3 injections
    - Given at 0, 1, and 6 month intervals
    - Effective in 95% of people who complete series of all three shots
    - Series may continue if exceeded interval (i.e. do not have to start over even if 1st shot was 2 years ago)
- Hepatitis C Virus
  - There is NO vaccine. Treatment is only effective in 40% of cases.

Hepatitis B Vaccination



- Three injections in deltoid muscle
- Mild to no side effects
- Produces only one antibody
- Series of 3 injections
- Titer required for new “health care workers”
- 95% effective when all doses taken
- If you are interested in the vaccine, please indicate you wish to receive the series through the Hepatitis B consent/declination question at the end of the quiz.

Engineering Controls - Sharps



- Sharps containers
  - Closable
  - Puncture resistant
  - Leak proof
  - Labeled or color coded
- Determine sharp disposal method
  - Use licensed contractor
  - Deliver to local hospital
  - Mail-in systems

Administrative Controls

- No food or application of cosmetics in the area where blood or other body fluids are present!
- Direct victims in self-care where possible
- Hand-washing facilities

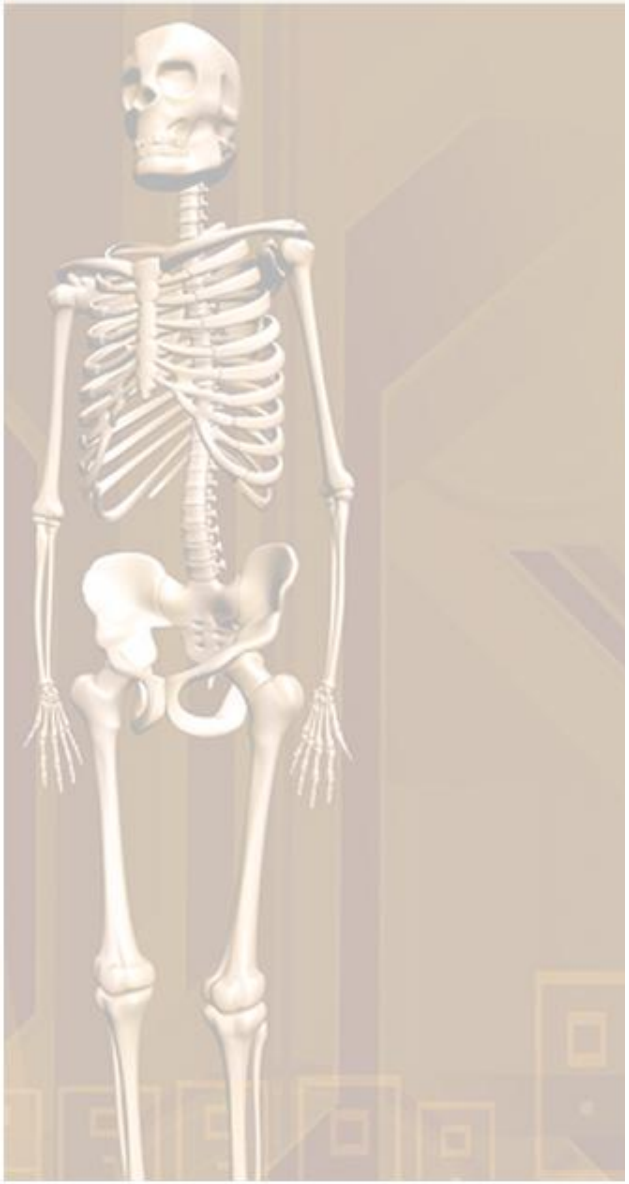
Personal Protective Equipment

Gloves shall be worn when it can be reasonably anticipated that you may:

- Have hand contact with blood or other infectious materials
- Have hand contact with mucous membranes
- Have hand contact with non-intact skin
- Handle or touch contaminated items or surfaces

Please speak with your supervisor if you need PPE

Gloves



- Don prior to contact with blood
- Check for proper fit
- Check for punctures
- Wash hands before/after
- Pull snug to insure good fit
- Peel off from wrist to fingers
- Dispose of in waste container
- Do not reuse

First Aid Procedures

- Assess the situation - call nurse for assistance or send injured to nurse's office
- Use personal protective equipment
- Instruct injured person on self-care – if they can hold a tissue to their nose or apply a band aid themselves, have them do it!
- **Wash hands**
- Do not perform first aid unless trained to do so!

Cleaning Procedures

- Call a custodian if clean up is needed
- Use gloves
- Use disposable towels to absorb spill
- Clean spill area with soap and water
- Use proper disinfectant
- Dispose of waste in proper container

Hand-washing

- Use warm water only
- Apply liquid soap to palms first
- Lather well; spread lather to back of hands and wrists
- Scrub for at least 15 seconds, including fingernails and area between fingers
- Rinse well & dry completely
- Turn off faucet using disposable towels

Disinfectants

- High level commercial germicides
  - — Products effective against HBV and HIV are approved by EPA
  - — Follow label instructions
    - •PPE
    - •Disposal
    - •Kill time
- EPA - List D - Primary Registrants on National Antimicrobial Information Network:
- http://www.epa.gov/oppad001/list_d_hepatitisbhiv.pdf

Infectious Waste

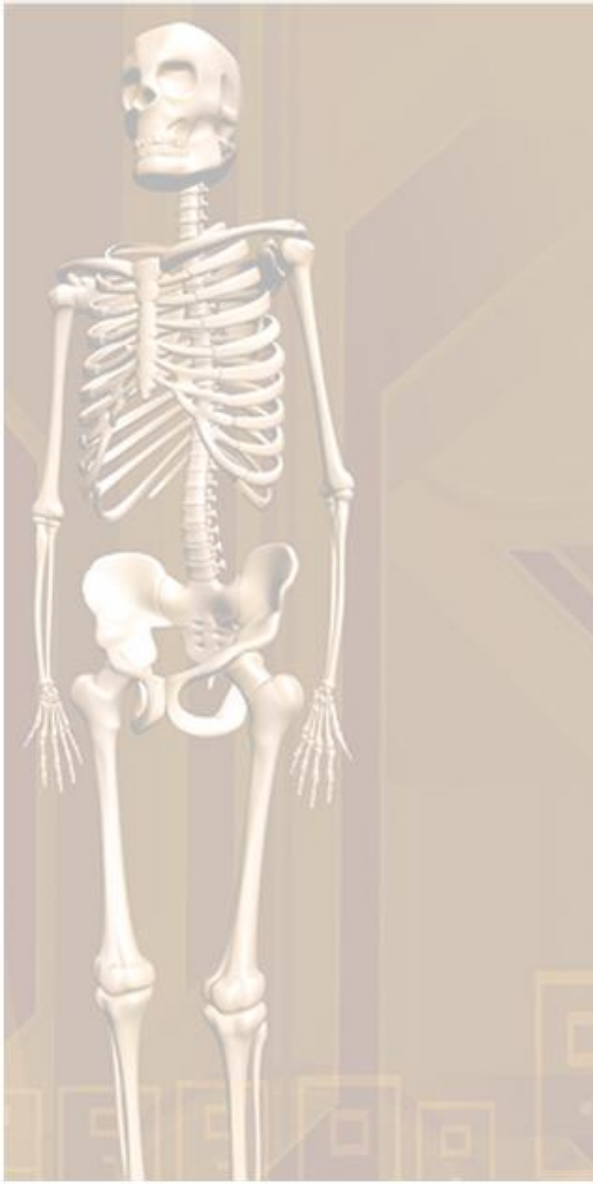
- Typically in normal trash
- Red biohazard bags require special disposal procedures. Use only IF:
  - Saturated or dripping
  - Pourable

EXPOSURES: DEFINITIONS AND PROCEDURES

What qualifies as a blood exposure?

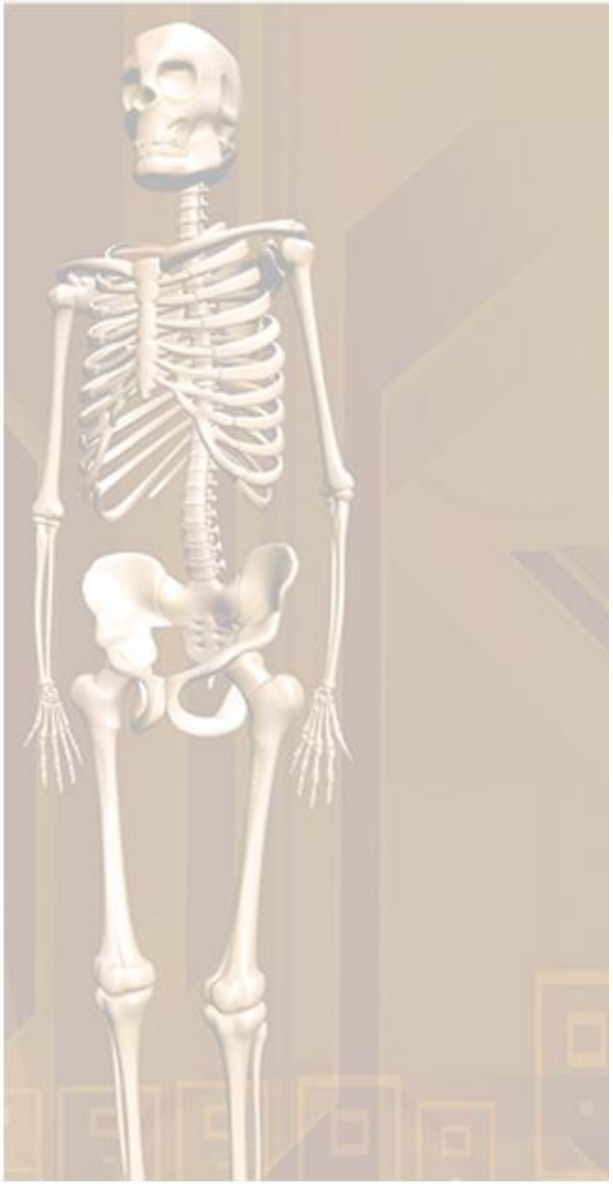
- **“Exposure Incident” means a specific eye, mouth, other mucous membrane, non-intact* skin, or parenteral** contact with blood or other potentially infectious materials that results from the performance of an employee’s duties.**
- *Non-intact skin includes skin with dermatitis, hang-nails, cuts, abrasions, chafing, acne, etc.
- **Parenteral means piercing mucous membranes or the skin barrier though such events as needle sticks, human bites, cuts, and abrasions.
- When an employee experiences an “exposure incident”, the employer must institute the required follow-up procedures in their plan.

Five steps if exposed to blood



1. Wash exposed area IMMEDIATELY!
2. Flush splashes to nose, mouth, or skin with water.
3. Irrigate eyes with water or saline.
4. Report the exposure to supervisor and building nurse.
5. Seek assistance of health care professional at Mayo Health Clinic – New Prague to determine follow-up actions (if necessary).

Training



- Offered to all employees covered in district's BBP plan
- Annual
- Includes the following:
  - Background of Standard
  - Activities which may result in exposure
  - Safe work practices/PPE
  - How to handle clean-ups
  - Signs & symptoms of disease
  - Hepatitis B vaccination
  - Post exposure procedures

Recordkeeping

- ***Medical***
  - duration of employment + 30 years
- ***Training***
  - 3 years
- ***Exposure Incident***
  - duration of employment + 30 years

Quiz and Questions

- Please click on the link below for the BBP Quiz. That will be your documentation of training for this year.

- BBP Quiz

- If you have any questions throughout the quiz, please contact Sue Liebl with IEA at 507.345.8818 or Susan.Liebl@ieainstitute.com