

# Bloodborne Pathogens



## Infection Control



9-9-14

# Bloodborne Pathogen Standard



THE BLOODBORNE PATHOGEN STANDARD IS A REGULATION CREATED TO PROTECT EMPLOYEES WHO MAY COME IN CONTACT WITH BLOOD OR POTENTIALLY CONTAMINATED MATERIAL ON THE JOB.

## MASONIC PATHWAYS' POLICIES

(POLICY INDEX)


EXPOSURE CONTROL PLAN

IC-A 101

POST EXPOSURE FOLLOW UP

IC-C 113





Gloves, gowns, masks, and eye protection can significantly reduce health risks for workers exposed to blood and other potentially infectious materials. The OSHA standard covering bloodborne disease requires employers to provide appropriate personal protective equipment (PPE) free of charge to employees.

**Bloodborne pathogens are infectious materials in blood that can cause disease in humans, including hepatitis B and C and human immunodeficiency virus, or HIV. Workers exposed to these pathogens risk serious illness or death.**



### **SELECTING PPE**

Personal protective clothing and equipment must be suitable. This means the level of protection must fit the expected exposure. For example, gloves would be sufficient for a laboratory technician who is drawing blood, whereas a pathologist conducting an autopsy would need considerably more protective clothing.

U.S. Department of Labor Occupational Safety and Health Administration



# Other Protective Practices



**HANDS ARE WASHED IMMEDIATELY AFTER REMOVING PROTECTIVE EQUIPMENT. NOTIFY SUPERVISOR IMMEDIATELY OF ANY EXPOSURE.**

**EMPLOYEES MUST REFRAIN FROM EATING, DRINKING, APPLYING COSMETICS OR LIP BALM, AND HANDLING CONTACT LENSES IN AREAS WHERE THEY MAY BE EXPOSED TO BLOOD OR OTHER POTENTIALLY INFECTIOUS MATERIALS.**

**REFER TO OSHA FACT SHEETS@**

[HTTP://WWW.OSHA.GOV/OSHD/DOC/DATA\\_BLOODBORNEFACTS/INDEX.HTML](http://www.osha.gov/OSHD/DOC/DATA_BLOODBORNEFACTS/INDEX.HTML)

# Hepatitis A



**HEPATITIS MEANS INFLAMMATION OF THE LIVER.**

**TOXINS, CERTAIN DRUGS, SOME DISEASES, HEAVY ALCOHOL USE, AS WELL AS, BACTERIAL AND VIRAL INFECTIONS, CAN ALL CAUSE HEPATITIS. VIRAL HEPATITIS IS THE LEADING CAUSE OF LIVER CANCER. THE MOST COMMON ARE HEP A, HEP B AND HEP C.**

**HEPATITIS A IS CONTAGIOUS AND IS USUALLY SPREAD WHEN A PERSON INGESTS FECAL MATTER — EVEN IN MICROSCOPIC AMOUNTS — FROM CONTACT WITH OBJECTS, FOOD, OR DRINKS. PEOPLE USUALLY IMPROVE WITHOUT TREATMENT.**

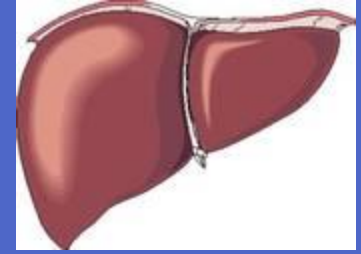
# Hepatitis B



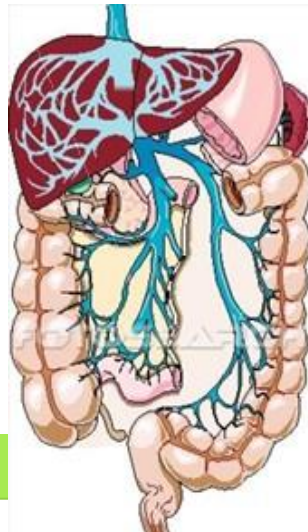
**HEPATITIS B IS CAUSED BY THE HEPATITIS B VIRUS AND CREATES INFLAMMATION OF THE LIVER. HEP B CAN BE DEADLY. THERE IS A HEP B VACCINATION. HEALTH CARE WORKERS AT RISK FOR EXPOSURE TO BLOOD OR BODY FLUIDS ON THE JOB SHOULD BE VACCINATED.**

**HEPATITIS B VIRUS CAN SURVIVE OUTSIDE THE BODY AT LEAST 7 DAYS. DURING THAT TIME, THE VIRUS CAN STILL CAUSE INFECTION IF IT ENTERS THE BODY OF A PERSON WHO IS NOT INFECTED.**

# Hepatitis C



**HEP C...THIS IS THE MOST COMMON BLOODBORNE INFECTION WHICH CAN CAUSE SERIOUS LIVER DISEASE AND DEATH. THIS IS CAUSED BY THE HEPATITIS C VIRUS GAINING ENTRY. THE HEPATITIS C VIRUS CAN SURVIVE OUTSIDE THE BODY, AT ROOM TEMPERATURE AND ON INANIMATE OBJECTS CONTINUING TO CAUSE INFECTION.**



# Bloodborne Pathogens/Infection Control

## HIV/AIDS

**AIDS** ...Acquired Immune Deficiency Syndrome. This is a disorder caused when HIV (Human Immunodeficiency Virus) damages the immune system. The person is then left open to infection of many kinds that most people could easily fight off or would rarely get.

## Don't forget PPE

**PPE**..Personal Protective Equipment provides a barrier against transmission of infection. PPE includes gloves, gowns, masks, goggles, face shields and resuscitation equipment.





# TB



Tuberculosis (TB) is a disease caused by the microorganism *Mycobacterium Tuberculosis*.

TB usually affects the lungs, but it can also affect other parts of the body, such as:



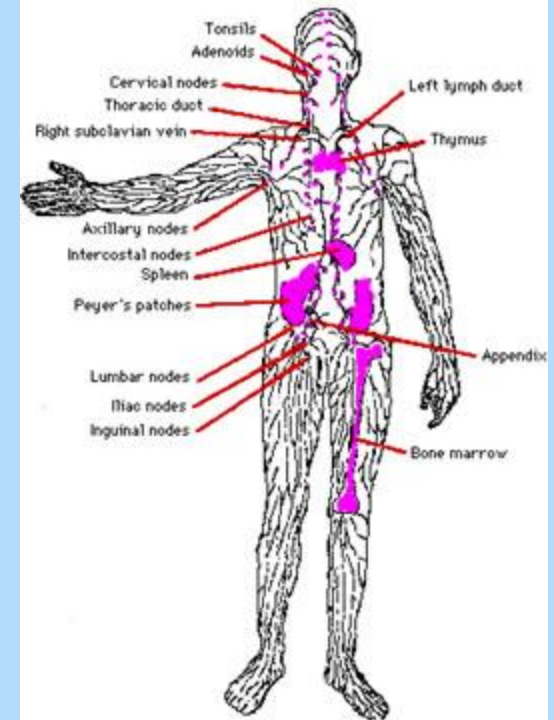
the spine



the kidneys



the brain



the lymph nodes

# TB continued

## Mantoux Tuberculin Skin Test (TST or PPD) tests for TB



TB is spread from person to person through the air by:

- Coughing
- Sneezing
- Singing
- Talking

Anytime air is pushed from the lungs. People can become infected by breathing air containing TB germs.

Other tests include; physical exam, chest x-ray, sputum smear and culture

A person can develop a TB infection after being exposed to the TB germ. TB can remain *latent* as long as the person's immune system is strong. *Latent* TB can become active as the person's immune system becomes weak.

\*Masonic Pathways has two dedicated TB isolation rooms on 1 North, rooms 116 & 117, if ever needed.

# To Reduce the Risk of Exposure to BBP -



Use biohazard bags to dispose of materials with blood or body fluids. Biohazard warning labels are required on any container holding contaminated materials.

Intentional hand washing is the number 1 way to prevent the spreading of germs.

Use sharps disposal containers to place sharps items, such as needles.



# Exposure Information

Policy IC-C 113



IMMEDIATE TREATMENT FOR EXPOSURE TO BLOOD OR OPIM:

SKIN EXPOSURE: WASH THE AFFECTED AREA WITH SOAP AND RUNNING WATER FOR AT LEAST 10-15 SECONDS AND WIPE WITH AN ALCOHOL OR BETADINE SWAB.

MUCOUS MEMBRANE EXPOSURE: FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 60 SECONDS

NOTIFY SUPERVISOR AND COMPLETE THE EMPLOYEE INJURY REPORT

# Standard Precautions & PPE



A method of infection control—recommended and authored by the CDC—in which blood & OPIM (other potentially infectious material) are handled as if they are infectious with HIV, HBV, and/or other bloodborne pathogens.

**Gloves** – Use when touching blood, body fluids, secretions, excretions, contaminated items; for touching mucus membranes and nonintact skin.



# Standard Precautions con't.



**Gowns** – Use during procedures and patient care activities when contact of clothing/exposed skin with blood/body fluids, secretions, or excretions is anticipated.

**Mask and goggles or a face shield** – Use during patient care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.

Respiratory Hygiene/Cough Etiquette is a component of Standard Precautions and is targeted at patients/residents and accompanying family members and friends with undiagnosed transmissible respiratory infections. They apply to any person with signs of illness including cough, congestion, rhinorrhea, or increased production of respiratory secretions when entering a healthcare facility. The concepts of respiratory hygiene and cough etiquette involve using control measures to prevent patients/residents with respiratory infections from transmitting their infection to others. These measures include asking coughing or sneezing persons to:

- Cover their mouth and nose with tissues and dispose of used tissues in waste containers.
- Use a mask if coughing (when a mask can be tolerated).
- Perform hand hygiene (wash with soap and warm water for 20 seconds or clean hands with alcohol-based hand product if hands are not visibly soiled) after contact with respiratory secretions.
- To stand or sit at least 3 feet from other persons, if possible.

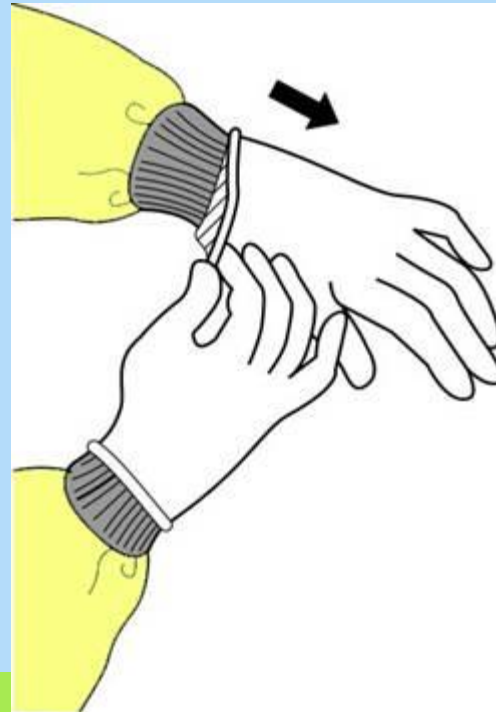
# How to remove gloves



Grasp outside edge near wrist

Peel away from hand, turning glove inside-out

Hold in opposite gloved hand



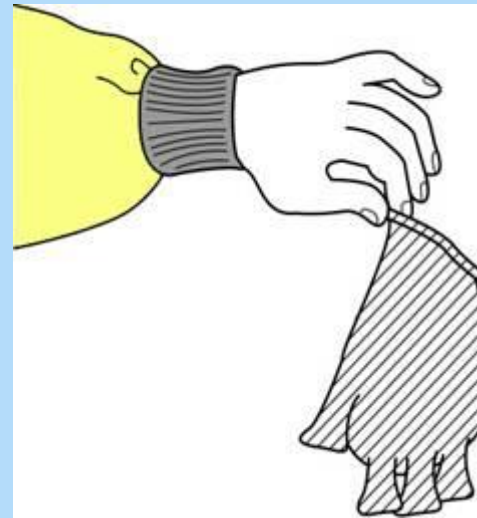
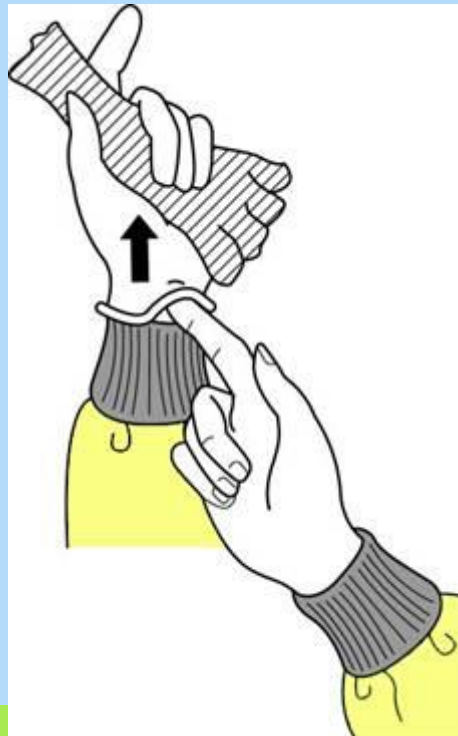
# How to remove gloves



Slide ungloved finger under the wrist of the remaining glove

Peel off from inside, creating a bag for both gloves

Discard





# Transmission Based Precautions



**TRANSMISSION-BASED PRECAUTIONS ARE DESIGNED TO SUPPLEMENT STANDARD PRECAUTIONS IN PATIENTS/RESIDENTS WITH DOCUMENTED OR SUSPECTED INFECTION/COLONIZATION OF HIGHLY TRANSMISSIBLE PATHOGENS. THE THREE CATEGORIES OF TRANSMISSION-BASED PRECAUTIONS INCLUDE: CONTACT, DROPLET, & AIRBORNE.**

**FOR DISEASES THAT HAVE MULTIPLE ROUTES OF TRANSMISSION (E.G., SEVERE ACUTE RESPIRATORY SYNDROME (SARS)), MORE THAN ONE TRANSMISSION-BASED PRECAUTIONS CATEGORY MAY BE USED. WHEN USED EITHER SINGULARLY OR IN COMBINATION, THEY ARE ALWAYS USED IN ADDITION TO STANDARD PRECAUTIONS.**



**STOP SIGNS ARE PLACED OUTSIDE OF THE DOOR WHEN A RESIDENT OR PATIENT IS ON PRECAUTIONS. ALL STAFF AND VISITORS ARE DIRECTED TO SEE THE NURSE PRIOR TO ENTERING FOR APPROPRIATE PRECAUTIONS.**



**Contact Precautions** are designed to reduce the risk of transmission of microorganisms by direct or indirect contact. Direct contact transmission involves the physical transfer of microorganisms to a susceptible host from an infected or colonized person. Indirect contact transmission involves contact of a susceptible host with a contaminated intermediate object. Examples of Diseases: gastrointestinal infections (including diarrhea of unknown origin), wound and skin infections (e.g. impetigo) and colonization with multidrug-resistant bacteria (e.g. methicillin-resistant *Staphylococcus aureus* (MRSA)).

## Special Factors:

- Private room or rooms with a patient/resident who has a similar diagnosis.
- Patient/resident should stay in room except for medically necessary procedures or therapies.
- Gloves for any contact with patient/resident or touching anything in the room.
- Gown if it is likely that clothing will be in contact with any patient/resident or any surfaces in the patient/resident care environment.
- Mask and eye protection if splashing or splattering of any contaminated substance is likely.
- Patient/resident care items such as blood pressure cuff, stethoscopes or thermometer should be “dedicated” (used only for that patient/resident and disinfected or discarded after the patient/resident is discharged).



## **Droplet Precautions**

are designed to reduce the risk of droplet transmission of infectious agents. Infectious droplets are released when the infected person sneezes or coughs and the large droplet spray may spread as far as three feet. Examples of Diseases: Influenza, meningococcal meningitis, mumps, rubella, diphtheria, pneumonic plague, pertussis and infections caused by multidrug resistant *Streptococcus pneumoniae*.

## **Special Factors:**

- Private room or rooms with a patient/resident who has a similar diagnosis.
- Patient/resident should stay in their room except for medically necessary procedures; a mask should be worn when out of the room.
- A regular/surgical mask should be used for any potential exposure within three feet of the patient/resident.
- Gloves, gowns, and masks are required when delivering patient/resident care in droplet precautions.
- Patient/resident care items such as blood pressure cuff, etc. should be dedicated to that patient/resident.
- Patient/resident should be taught to cover their nose and mouth with tissues when coughing or sneezing and to discard tissues into a bag and good hand hygiene.



**Airborne Precautions** are designed to reduce the risk or eliminate the airborne transmission of infectious agents. The infectious particles are so small that they can remain suspended in the air for long periods of time and are carried on air currents. Examples of Diseases: varicella (chickenpox), tuberculosis, measles.

## **Special Factors:**

- Private room with special ventilation; door must be kept closed.
- The patient/resident should stay in his or her room except for essential reasons; a special mask should be worn when out of the room.
- Respirators are worn by personnel if the patient/resident has or is suspected of having an airborne illness.
- Respirators are worn for chickenpox or measles only if the employee entering has not had the disease or has not been immunized.
- Gloves: Worn when in contact with respiratory secretions.
- Patient/resident care items such as blood pressure cuffs, etc. should be dedicated and disinfected or discarded after the patient/resident is discharged.
- Patient/resident should be taught to cover their nose and mouth with tissues when coughing or sneezing and to discard tissues in a bag and good hand hygiene.

# Policy Number: IC-C 111

## Waste and Medical Waste Management

### Precautions to be used for Handling Trash and Medical Waste

#### A. Worker Protection

PPE shall be used as indicated in the Masonic Pathways Standard Precautions and Isolation Procedures during the transport and storage of trash and medical waste.

Handwashing shall be practiced as outlined in the Masonic Pathways Policies ICC 105 and IC-C 103.

Staff handling and picking up trash from the units shall wear gloves.

Trash shall be picked up at a minimum of daily and removed to the appropriate area for disposal.

Staff shall tie all bags shut prior to transport and pick up the bags by the top.

Sharps container shall be replaced routinely and not allowed to overfill.

Sharps containers are kept accessible at the point of use and always maintained in an upright position.

Biohazard labeled fluid resistant red bags and biohazard labeled boxes are used for the disposal of medical waste and secretions.

**Trash:** All waste generated at Masonic Pathways not defined as medical or pathological waste. This waste is also considered to be possibly contaminated with pathogens but does not fall into the category of regulated waste.

**Any trash soiled with bodily fluids will be tied up and removed from the resident room immediately after care is completed. Trash will be disposed of properly in the designated area on the unit.**



## Always remember...

### Hand hygiene

Use of **personal protective equipment** (e.g., gloves, gowns, masks)

### Safe injection practices

Safe handling of potentially contaminated equipment or surfaces in the patient environment

**Respiratory hygiene/cough etiquette.**



**Prophylaxis...** To take prophylactic measure is to attempt to prevent disease rather than have to treat once disease takes place.

# Routine Hand Hygiene



Most common mode of transmission of pathogens is by the hands!



Wash hands for at least 20 sec according to the CDC guidelines. Use soap and water when hands are visibly soiled, contaminated or there is a build up of sanitizer. Use disposable paper towel to dry hands and to turn off the faucet. Hand sanitizer can be used for routine hand decontamination when hands are not visibly soiled, contaminated or do not have a build up of hand sanitizer on them.

[www.who.int/gpsc/5may/video/en/index.html](http://www.who.int/gpsc/5may/video/en/index.html)



# LTC Resident Risk Factors



Risk factors for infection are prevalent among LTC residents. Age-related declines in immunity may affect responses to immunizations. Immobility, incontinence, dysphagia, comorbid diseases, poor functional status, and age-related skin changes increase susceptibility infections, while malnutrition can impair wound healing.

Medications (e.g., drugs that affect level of consciousness, immune function, gastric acid secretions, and normal flora, including antimicrobial therapy) and invasive devices (e.g., urinary catheters, tracheostomy and feeding tubes) heighten susceptibility to infection in LTC residents.



# Follow up post exposure:



Any exposure is:

- Reported immediately to a supervisor
- An employee injury report is filled out and employee reports to HR
- HR determines whether a medical evaluation is required through OHS
- HR follows up on OHS post exposure evaluations and directs employee for follow-up or treatment as necessary

# References



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