

# BLOODBORNE DISEASES

- Prevention of transmission for school staff
  - for staff not directly responsible for providing care or cleaning up blood

# **MASSACHUSETTS DIVISION OF OCCUPATIONAL SAFETY**

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# OSHA STANDARD ON BLOODBORNE DISEASES

- OSHA Bloodborne Pathogens standard that addresses means of prevention issued in December 1991 - took full effect in 1992
- Standard was amended in 2001



# OSHA IN MASSACHUSETTS

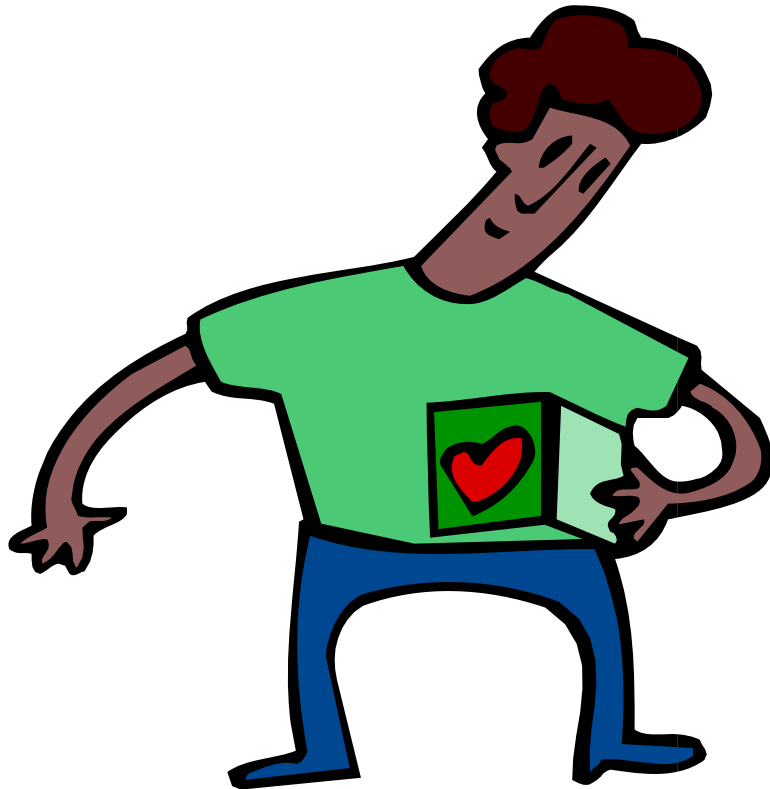
- OSHA does not cover public sector workplaces in Massachusetts
- OSHA standard is a standard of care, however
- significant risk of liability if the standard isn't followed & transmission of disease occurs

# MASSACHUSETTS DIVISION OF OCCUPATIONAL SAFETY (DOS)



- DOS covers municipal and county workers via M.G.L.. Chapter 149.
- Interpretation by DOS is that, to meet the intent of Ch.149 section 6, OSHA standards should be followed as a minimum for county and municipal workplaces (including schools).

# BLOODBORNE: DEFINITION



- Bloodborne diseases:
- potentially transmitted when an infected person's body fluids somehow get inside another person's body

# BLOODBORNE: DEF. (CONT'D)



- Bloodborne diseases:
- not transmitted through casual contact - won't get them by shaking an infected person's hand or by using the same bathroom or kitchen facilities

# BLOODBORNE DISEASES: EXAMPLES

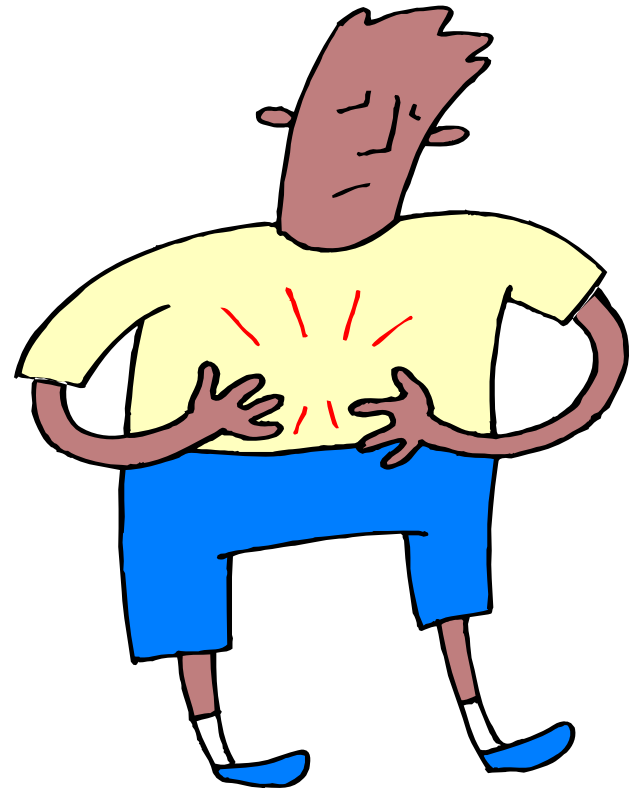
- Examples of bloodborne diseases:
- Hepatitis B
- Hepatitis C
- AIDS (HIV)





# HEPATITIS B (HEP B)

- Hep B: inflammation of the liver caused by the Hepatitis B virus
- Disease is not always evident- can go misdiagnosed or undiagnosed – may have flu-like symptoms
- Preventive vaccine available



# HEPATITIS C (HEP C)



- Currently, most common type of viral hepatitis in the United States
- Leading cause for need for liver transplants in the U.S.
- No cure
- No vaccine available

# HIV INFECTION



- HIV (Human immunodeficiency virus) or AIDS virus may lead to disease AIDS
- HIV attacks the immune system - a person becomes unable to fight off other infections
- No vaccine available
- Treatment is available

# TIME FRAME



- With any of these diseases, it is possible that at least some infected people may look and feel well, perhaps for years
- Despite this, they are still potentially infectious for others and may develop serious diseases

# BODY FLUIDS THAT POTENTIALLY TRANSMIT THESE DISEASES

- Blood
- Semen
- Vaginal secretions
- Breast milk
- Fluids that surround our internal organs

## BODY FLUIDS (CONT'D)

- Body fluids or substances that, **only if contaminated with blood**, would be considered potentially infectious. According to Centers for Disease Control and Prevention (CDC), these include:

saliva, urine, feces, vomitus, sweat, tears

# SURVIVAL OUTSIDE THE BODY



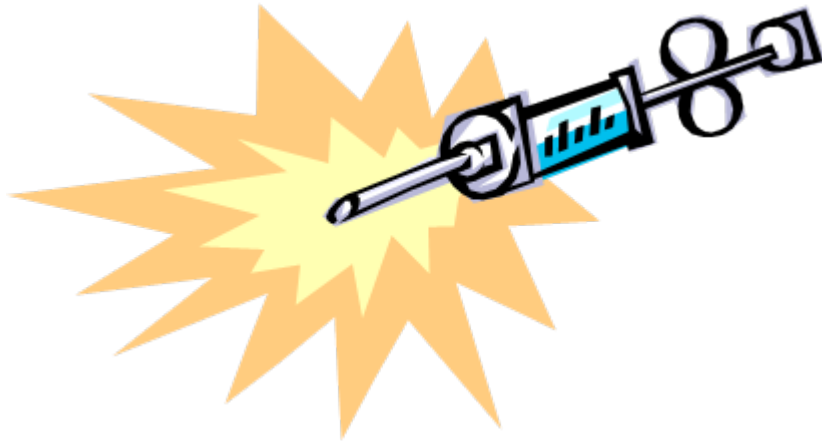
- These diseases may be transmitted indirectly
- This can happen when you touch an object or surface contaminated with blood or infectious materials and transfer them to your mouth, eyes, nose or opening in your skin.

# SURVIVAL OUTSIDE THE BODY (CONT'D)

- Hepatitis B virus may be able to survive even in dried blood on environmental surfaces for one to two weeks (maybe even longer)
- HIV begins to die off almost immediately once it is outside of the body (exposed to air)
- Hepatitis C virus - limited information exists



# MODES OF TRANSMISSION (NON-OCCUPATIONAL)



- Transmission can occur only when an individual's infected body fluids get inside another person's body. This can happen by:
  - sexual contact
  - sharing needles (ex: drug needles, tattooing, body piercing, body mutilation)

# MODES OF TRANSMISSION (OCCUPATIONAL)

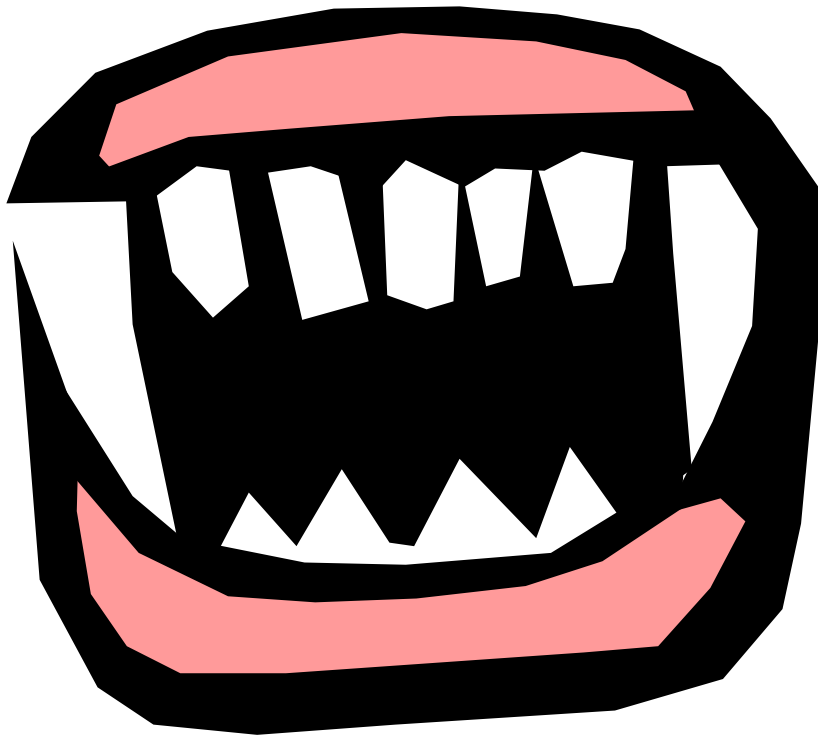


- What are ways you can be exposed at work?
- For workers, there are generally three ways that transmission can occur:
  - opening in the skin
  - through the mucous membranes (eyes, nose, mouth)
  - needlestick

# MODES OF TRANSMISSION (CONT'D)

- **The skin, if intact, is a good barrier**
- But, if infected body fluids get into **broken** skin, there is a slight possibility of transmission
- If infected body fluids get in the eyes, mouth, or nose, there's a slight possibility of transmission
- Sharps injuries (for ex., needlesticks) are the riskiest. Other sharps include broken glass, knives, orthodontic wires)

# MODES OF TRANSMISSION (CONT'D)



- There is evidence that Hep. B can be transmitted through a bite
- There is no evidence that the AIDS virus can
- Hepatitis C – no indication found at this time

# UNIVERSAL PRECAUTIONS / BODY SUBSTANCE ISOLATION



- To protect yourself & your families, consider all persons to be potentially infectious & take precaution.
- Body substance isolation is when all body fluids or substances are considered potentially infectious.

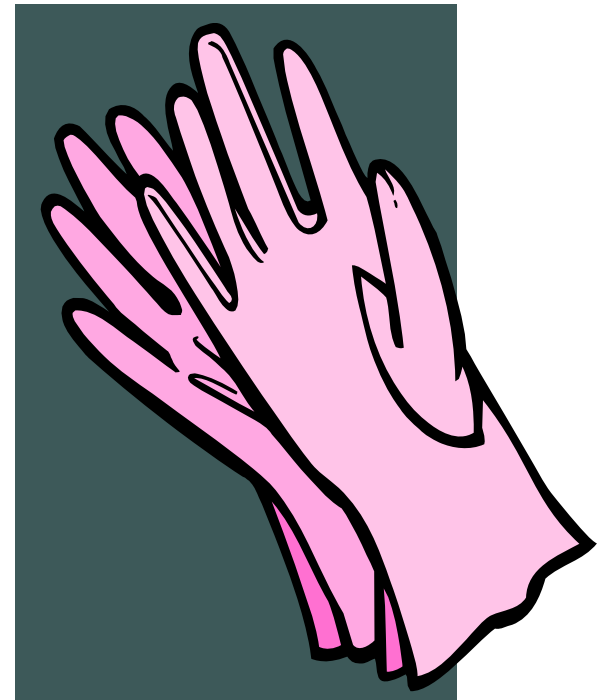
# MEANS OF PREVENTION: HEPATITIS B VACCINE

- For those anticipated to be exposed, series of three shots is available
- If you get the first one today, the second would be one month from today, and the third would be four to six months after the first shot



# PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Gloves to prevent skin contact with blood or other body fluids
- Available in different sizes
- If a person is allergic to latex, use gloves of other material (e.g., nitrile or vinyl)
- Gloves are removed inside out : don't touch outside of gloves with bare hands
- Wash hands after remove gloves



# PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Gloves should be readily available
- They should be kept in a universal location (for example, in the upper right hand drawer of the teacher's desk).





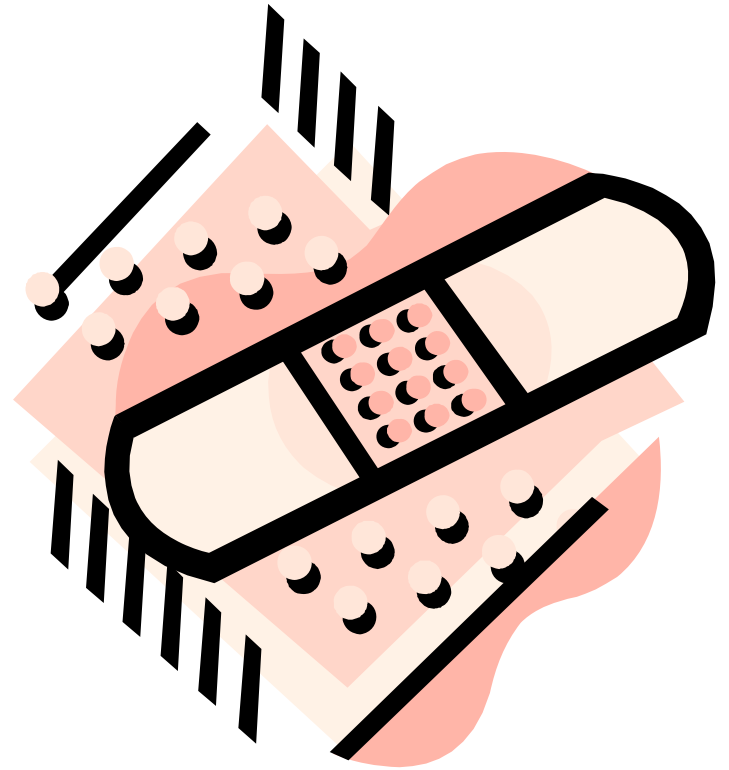
# PERSONAL HYGIENE

- After removing gloves:
- Wash hands with soap (liquid, if possible) and running water. Do for at least 20 seconds.
- Use waterless hand cleanser if soap and running water not immediately available. Then, wash with soap and running water as soon as possible.

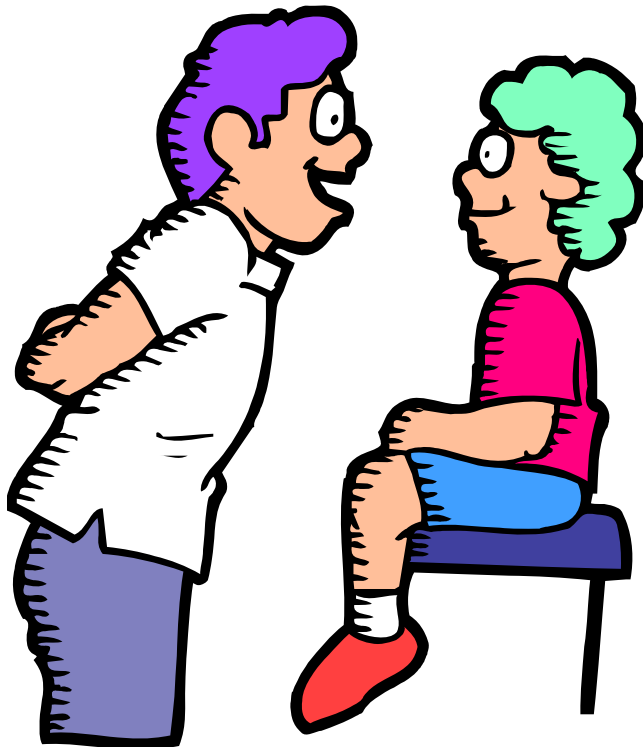


# TIPS TO CONSIDER

- To avoid exposures, **protect yourself first**
- If you have an open wound or cut, make sure you have a bandaid on.
- Always have gloves on hand: e.g., on field trips or at sports events or on the playground



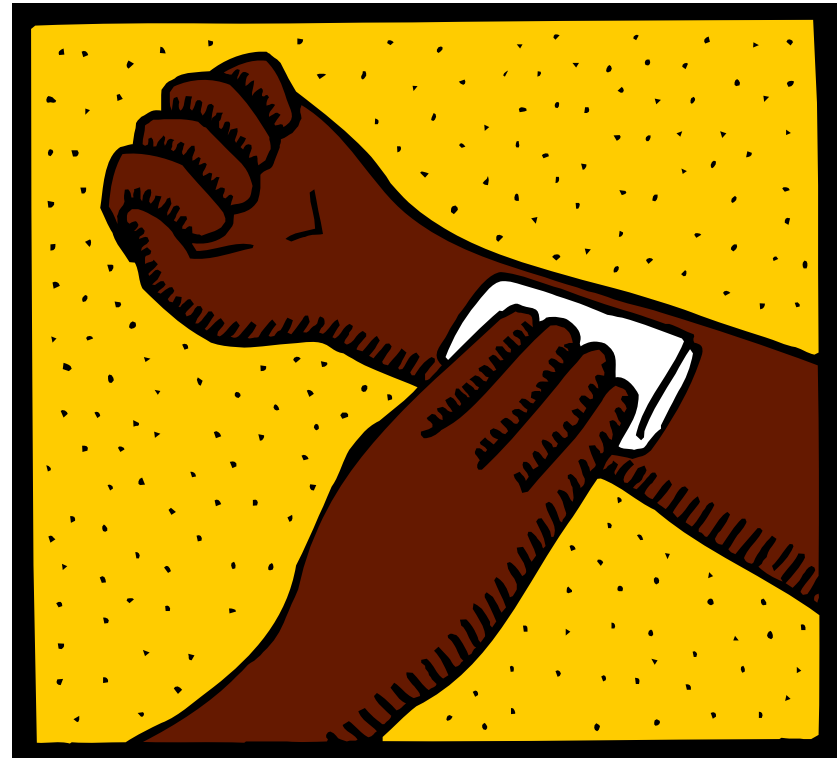
# TIPS TO CONSIDER (CONT'D)



- Use your words instead of your body:
- If necessary, you could supply protective covering (e.g., tissue, gauze) to the injured student or employee but, tell him/her to treat his/her own wound, if at all possible. Remember, any barrier is better than none.

## TIPS TO CONSIDER (CONT'D)

- The student or employee, if possible, should hold pressure on a wound and wash wound himself.
- Have the individual pinch her own nose if she has a nose bleed
- Remind the individual to wash his or her hands



# SAFE PROCEDURES: NEEDLES OR OTHER SHARPS

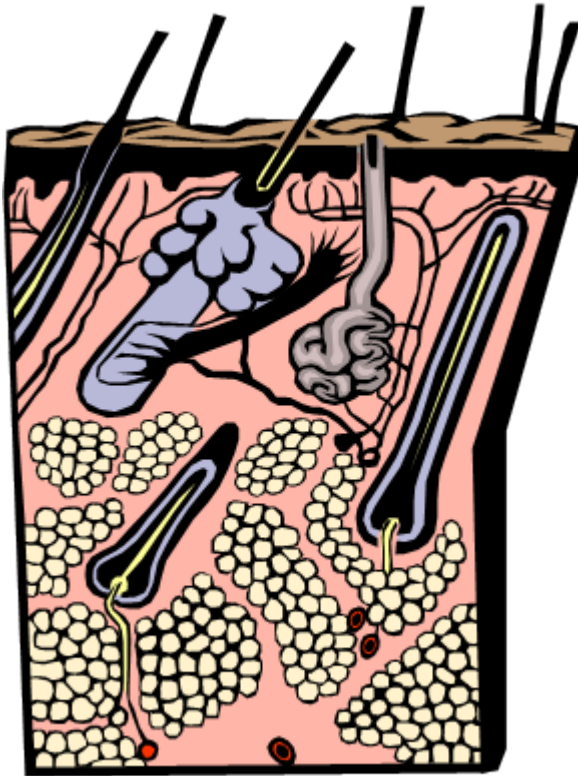
- If found, needles or other sharps must not be recapped.
- They should be disposed of in rigid, puncture resistant containers with sharp side facing down.
- These containers should be in the nurse's office.
- Notify appropriate personnel.



# IF AN INCIDENT OCCURS BUT YOU'RE NOT EXPOSED...

- If a spill of blood occurs (e.g., a student cuts him or herself or has a nose bleed) and you are **not** exposed:
- Call the appropriate personnel (e.g., nurse) for treatment of injured person
- Secure the area
- Call the appropriate personnel (e.g., custodian) for clean up

# IF AN EXPOSURE OCCURS...



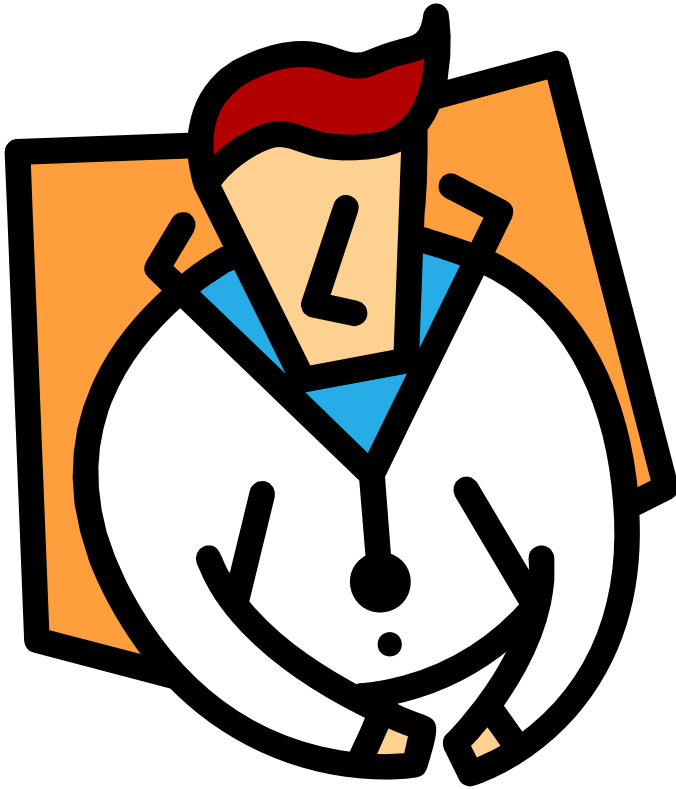
- If body fluids, particularly blood, get into an opening in the skin, wash the area with soap and running water
- **Applying bleach to the skin is not recommended**
- If body fluids, particularly blood, get into the eyes, flush with water or a saline solution

# STEPS TO TAKE IF EXPOSED

- Report the incident to the appropriate personnel (e.g., the nurse, principal, department head)
- Seek medical attention immediately



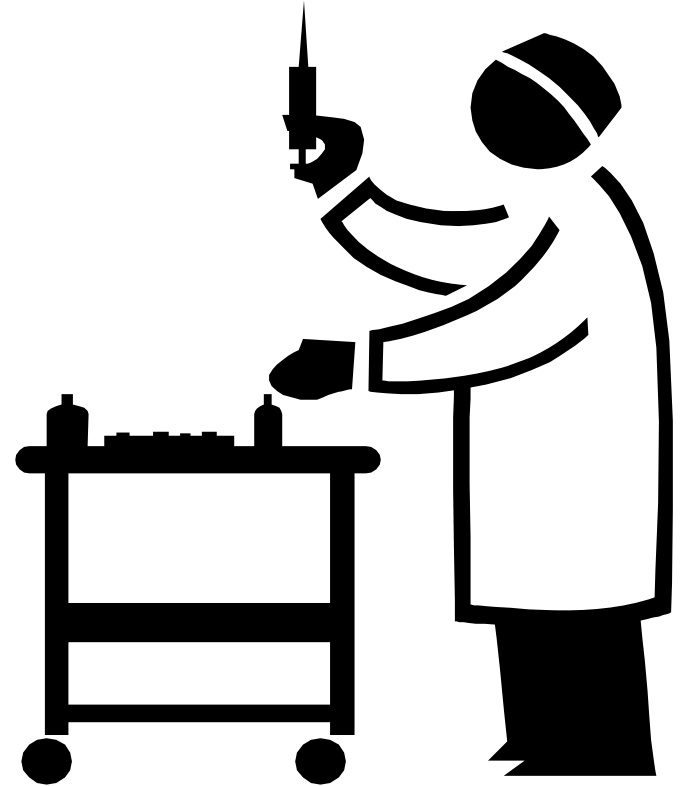
# WHEN IS MEDICAL ATTENTION APPROPRIATE?



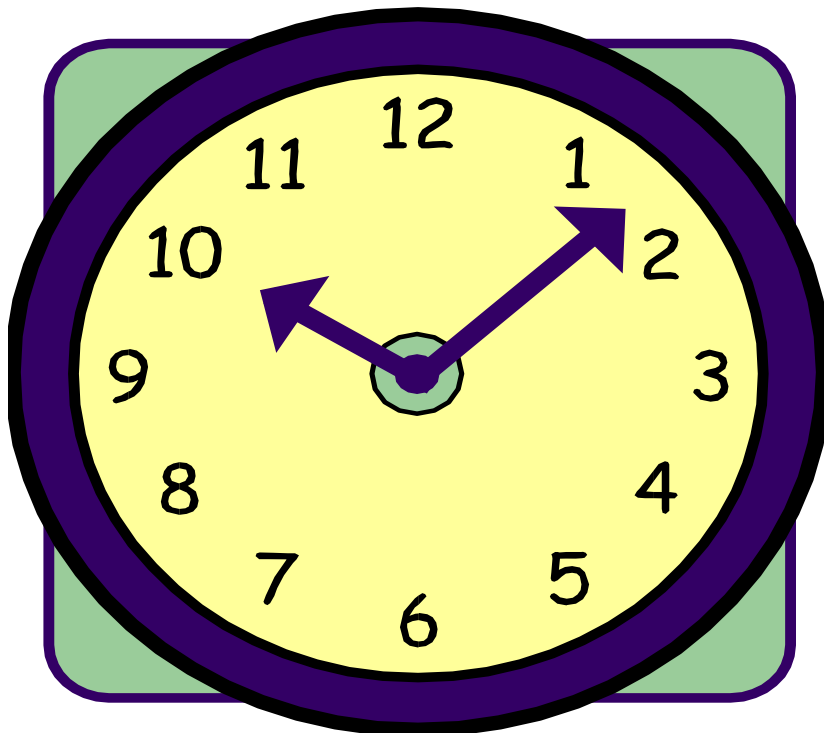
- Follow-up (medical attention) is needed if you have an unprotected exposure. Examples are:
- Blood splashing into an open cut or into the eyes
- An accidental needlestick
- A bite that breaks the skin

# POST-EXPOSURE FOLLOW-UP

- Whether you need treatment is dependent on different factors, such as type of exposure.
- If necessary, medication is available that may decrease an individual's risk of becoming infected with at least some of the diseases.



# TREATMENT AFTER AN EXPOSURE



- If medication is indicated, the sooner it is provided after an exposure, the more effective it will be.
- Other treatment that may be appropriate include blood test and counseling.

# PLEASE RECALL...

- Remember - even if you have been exposed, the odds are that you will not become infected.



# TRAINING



- Training on infectious diseases and their prevention should be offered to new employees and annually thereafter.

# RESOURCES (STATE)

- MA Division of Occupational Safety (DOS)
  - Tel: (617) 969-7177
  - website: [www.state.ma.us/dos](http://www.state.ma.us/dos)
- MA Department of Public Health (DPH)
  - Tel: (617) 624-6000
  - web site: [www.state.ma.us/dph](http://www.state.ma.us/dph)

# RESOURCES (FEDERAL)

- Centers for Disease Control & Prevention (CDC)
  - tel: 1-800-311-3435 or 1-888-232-3228
  - web site: [www.cdc.gov](http://www.cdc.gov)
- National Institute for Occupational Safety and Health (NIOSH)
  - tel: 1-800-356-4674
  - web site: [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

# RESOURCES - FEDERAL (CONT'D)

- Occupational Safety and Health Administration (OSHA)
  - tel: 617-565-9860
  - web site: [www.osha.gov](http://www.osha.gov)