

# WHAT ARE BLOODBORNE PATHOGENS?

They are viruses, bacteria and other microorganisms that:

- are "borne" or carried in a person's bloodstream,
- cause disease.

If a person comes in contact with blood infected with a bloodborne pathogen, he or she may become infected as well.

Other body fluids may spread bloodborne pathogens. These body fluids are termed "Other Potentially Infectious Materials" (OPIM). For example:

- blood products such as plasma,
- vaginal secretions,
- fluids in the uterus of a pregnant woman,
- fluids surrounding the brain, spine, heart, and joints,
- fluids in the chest or abdomen,
- other fluids containing visible blood.

Some bloodborne pathogens may be deadly.

The Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) attack the liver and can cause:

- active Hepatitis B or Hepatitis C; a flu-like illness that can last for months,
- a chronic carrier state the person may have no symptoms, but can pass the HBV or HCV to others,
- cirrhosis, liver cancer, and death.

Fortunately, a Hepatitis B vaccine is available that is safe and effective in the prevention of HBV infection. This vaccine is recommended for persons at risk of HBV infection, including health care workers and emergency personnel. There is no vaccine for HCV.

The Human Immunodeficiency Virus (HIV) causes AIDS. HIV attacks the immune system, making the body less able to fight off infections. In most cases, these infections eventually prove fatal.

Syphilis is a venereal disease considered a bloodborne pathogen as it can be transmitted via lesion contact or blood.

Bloodborne pathogens can be spread when infected fluids enter the body through:

- needle stick injuries,
- cuts, scrapes, and other breaks in the skin,
- splashes into the mouth, nose or eyes,
- Oral, vaginal or anal sex,
- sharing infected drug needles.

Pregnant women who are infected with HBV or HIV can pass the infection to their babies.

*Follow required work practices for your job.* For example:

- cover cuts, scrapes, hangnails, rashes, etc.,
- handle sharps carefully never bend, break or recap needles,
- minimize splashing of fluids, i.e., cover a specimen tube with gauze before pulling out the stopper.
- keep food and beverages where they belong not in refrigerators, freezers or cabinets used for infectious materials.
- **Don't** eat, drink or smoke in work areas where bloodborne pathogens may be present. Don't handle contact lenses or apply cosmetics or lip balm in such areas.

#### TAKE STEPS TO PROTECT YOURSELF

Follow Standard Precautions. Standard Precautions are the use of safe work practices, engineering controls, and the use of personal protective barriers to prevent contact with blood and OPIM. Standard Precautions include the following:

<u>Wear gloves</u> any time contact with blood or other body fluids may occur. For example:

- when touching any mucous membranes or broken skin,
- when handling items or touching surfaces soiled with blood or other body fluids,
- when drawing blood.

<u>Use masks and eve protection</u> or protective face shields if there's any chance that blood or other body fluids may splash into your mouth, nose or eyes.

<u>Wear a gown</u> or apron if splashing of blood or other body fluids is likely.

Wash your hands and other skin surfaces immediately after:

- direct contact with blood or other body fluids (without gloves, mask, etc.),
- removing gloves, gown or other protective clothing,
- handling potentially contaminated items.

**Cover up wounds** and broken skin. Also, refrain from all direct patient care and from handling patient care equipment if you have weeping dermatitis or sores with a discharge (unless you wear gloves and have a supervisor's okay).

<u>Use resuscitation bags</u>. mouthpieces or other devices, whenever possible for mouth-to-mouth breathing.

# ELIMINATE HAZARDS WITH PROPER HOUSEKEEPING

Don't touch broken glass - pick it up with tongs or a broom and dustpan.

**Dispose of sharps** in a covered, puncture resistant leak-proof container that is red or labeled with the bio-hazard symbol. (Keep the container nearby.)



<u>Place other contaminated wastes</u> (linens, gloves, etc.) in a leak-proof container or bag that is red or labeled with the bio-hazard symbol. (Bag linens where they are used.) If the outside of the container or bag becomes contaminated, place it in a second container or bag.

## TUBERCULOSIS: OLD ENEMY, NEW BATTLE

(That's right, after years of decline, tuberculosis [TB] is on the rise again.)

Before the 1940's, TB was quite common. Fortunately, a cure was found and TB dramatically declined in the U.S. duringthe mid-1980s, however, cases of TB began to increase.

<u>**TB**</u> is a serious disease caused by a tiny germ called mycobacterium tuberculosis, that can be inhaled into the lungs.

### TB germs are spread through the air.

This happens when a person with active infectious TB of the lungs or throat talks, coughs, sneezes, sings or yells.

TB is most commonly spread to people who spend a lot of time indoors with someone who has active TB. When a person breathes in the TB bacteria, the bacteria can settle in the lungs and begin to grow.

You cannot get TB by touching:

- bed linen,
- door knobs,
- utensils,
- clothing.

Basically, TB falls into two categories:

**<u>TB</u>** infection ("latent" <u>TB</u>) - this means the person carries TB germs, but does not look or feel sick and cannot infect others. A skin test will reveal evidence of TB germs in the patient's system. Preventative treatment is recommended for most people.

<u>**TB disease ("active" TB)**</u> - in this case, signs of illness are usually present. The person may:

- cough (for three weeks or more),
- feel weak,
- have a fever,
- have weight loss,
- lose his or her appetite,
- experience night sweats,
- cough up blood or have chest pain when coughing.

The person with TB disease can infect others unless he or she is taking medicine to cure TB as directed by a physician.

# **To Prevent TB Transmission**

**Isolation** - Patients suspected or known to have active TB are placed in acid fast bascilli (AFB) isolation until they are no longer infectious. This means doors are closed and air is vented to the outside. BY LAW, *special face masks (respirators)* must be worn by healthcare workers entering the room. Upland Hills Health uses N-95 respirators. N-95 respirators require special fit testing (size to fit your face).

#### Engineering Controls - They may include:

• Negative Air Pressure - this means ensuring that any air escaping an isolation room or high-hazard procedures area is vented outdoors (where TB germs can't survive.)

Upland Hills Health has special airflow rooms in the Emergency Department, the Medical-Surgical Unit, and in the Physician Specialty Clinic.

#### Encourage patients to cover their mouths and

noses when they cough or sneeze, even if they're alone. Have them wear masks if they leave isolation (for tests and other procedures).

#### Recognize high hazard procedures, these include:

- cough and sputum producing procedures,
- administration of aerosol drugs which cause coughing,
- endotracheal intubation and suctioning,
- bronchoscopy,
- autopsy procedures.

Anyone can get TB. However, some people are **at** increased risk for TB infection.

- people with HIV,
- anyone who shares close quarters with a person with active TB,
- foreign born people from nations with high rates of TB,
- alcoholics and intravenous drug users,
- chronically malnourished people,
- people who live or work in nursing homes, prison or certain hospitals,
- people with diabetes or silicosis (a lung disease caused by inhaling certain types of dust),
- homeless people.

# What About Drug-resistant Strains of TB?

These are strains of TB that cannot be cured by standard TB drug therapy. Drug-resistant TB has complicated medical efforts.

#### That's because:

<u>Patients remain infectious long</u>er. It takes physicians more time to diagnose, control, and cure drug-resistant TB.

<u>Alternative drugs are more toxic</u>. They're also more expensive and less effective. And, finding the right drug combination often involves trial and error.

Where do drug-resistant strains of TB come from? Patients who begin standard TB drug therapy MUST complete treatment. Otherwise, a small number of TB germs may remain in the body. These germs can mutate (change) in a way that allows them to survive standard TB drugs.

# That's why every TB germ in the body must be wiped out!

Upland Hills Health tests all employees annually with a TB skin test or if TB skin test is positive, the employee completes a health history screening form.

Upland Hills Health is considered a low risk TB facility. The TB risk assessment is conducted annually by the Infection Control Coordinator.

