Welcome to Bloodborne Pathogens Update
BIO 311

Ouch, That Hurts!

Needlestick injuries not only hurt and are dangerous, they cost money. It is estimated that 384,000 health care workers sustain a needlestick injury every year.

The annual cost associated with needlestick injuries is 258 million dollars.

The follow up cost, if the patient is not high risk, is 3,000 dollars per injury. It’s even more if the patient is high risk.

In 2007 the New England Journal of Medicine stated that 99% of all surgical residents had at least one injury during their final year of training. 53% of those injuries involved high risk.

Suture Needles, Injuries, and Pathogens

Sharp-tip suture needles are the leading source of penetrating injuries to the skin for surgical personnel. 51 to 77% of sharps injuries are caused by suture needles.

As an employee who has worked with blood before, you should know that penetrating injuries to the skin, or percutaneous injuries, can result in exposure to bloodborne pathogens.

These pathogens include, but are not limited to:

- the hepatitis B virus (HBV),
- the hepatitis C virus (HCV), and
- the human immunodeficiency virus (HIV).

Your chances of exposure to these bloodborne pathogens are:

- 1 in 5 for Hepatitis B if you’re not vaccinated,
- 1 in 50 for Hepatitis C, and
- 1 in 300 for HIV.

Sharp or Blunt?

Sharp suture needles are most often the culprit of percutaneous injuries. Most suture needles injuries frequently occur during the suturing of muscle and fascia, which is the sheet or band of fibrous connective tissue enveloping, separating, or binding together muscles, organs, and other soft structures of the body.
However, blunt suture needles are sharp enough to pierce muscle and fascia, but not sharp enough to pierce the skin.

For more information about blunt suture needles, go to the following website:


**When Most Injuries Occur**

Suture needle injuries can occur when surgical personnel:

- load or reposition the needle into the needle holder,
- pass the needle hand-to-hand between team members,
- sew toward the surgeon or assistant while the surgeon or assistant holds back other tissue,
- tie the tissue with the needle still attached,
- leave the needle on the operative field,
- place needles in an over-filled sharps container, or
- place needles in a poorly located sharps container.

**Making a Decision**

If you or your area decides to switch to blunt-tip suture needles, suture-less techniques, or other methods to reduce the number of sharps injuries, **you should be trained in the proper use and have someone follow up** to ensure their correct use or procedure. This switch and the subsequent training should be documented and kept in your files.
If your area decides that the use of safer devices (i.e., blunt-tip suture needles) is not practical, it should be documented along with a full explanation as to why. Again, make sure this is kept in your files.

Where Do You Start In Order to Protect Yourself?

1. The first priority is to eliminate and reduce the use of needles and other sharps wherever possible.
2. The next priority is to isolate the hazards and thereby protect otherwise exposed sharps, through the use of engineering controls.
3. Finally, regardless of whether an engineering control is available, safe work practices are always necessary to reduce sharps hazards in the workplace.

Avoiding Injury and Exposure

To avoid sharps injuries and exposure to bloodborne pathogens, you should always:

Practice good housekeeping. Make sure that sharps are not left unattended anywhere. Always place them in a sharps container. Never overfill a sharps container. This may cause injuries and exposure to others.

Wear the appropriate PPE. While gloves do not protect you from needle pricks, they can provide an extra layer of protection. Splash goggles and a clean buttoned lab coat are also essential.
Handle all sharps, including broken glass, with care. You should always be on alert when working with team members and handling sharps.

Training those new to the team and educating them in your safe practices keeps your skills up-to-date. This allows you and your team to discuss new and perhaps even safer methods of handling sharps and avoiding exposure to bloodborne pathogens.

**Focus!** Never allow your mind to wander from the job at hand when handling sharps.

**What to Do IF You are Exposed…**

If You are Exposed to Human Blood or Other Potentially Infectious Materials:

- Wash affected areas with soap and water,
- Flush mucous membranes with water,
- Notify your supervisor immediately, and
- Ensure that any spilled material is contained.

Consult with your supervisor and fill out the required Incident Report Form. This link can be found on the home page of this course and on the OH&S website under Forms.

https://riskmgmt.hs.uab.edu/incident.html
After the Exposure, Then What?

After a report of an exposure incident, a potentially exposed employee will be offered, at no cost:

- A confidential medical exam,
- Counseling,
- Blood testing/analysis, and
- A confidential reply from the attending healthcare professional within 15 days

The End

This concludes the Bloodborne Pathogen Update course. Please return to the home page of this course, and take the quiz. 80% or higher is required to pass.