

# Bloodborne Pathogens Key Topic for 2011

## Suture Needlesticks

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In 2011, the Occupation Health & Safety (OH&S) Bloodborne Pathogens course focused on needlesticks caused by sutures. This document covers statistics, risks, options, injuries, protection, and reporting related to suture needlesticks.

### Statistical Evidence

#### *And the truth is*

Needlestick injuries not only hurt and are dangerous, but they also cost money. Statistics show:

- **384,000 estimated healthcare workers** sustain a needlestick injury every year
- **\$258,000,000** is the annual cost associated with needlestick injuries
- **\$3,000 per injury** is the follow-up cost per patient *if* the person is not high risk. High-risk personnel drives the price even more!
- **99% of all surgical residents** had at least one injury during their final year of training as reported in 2007 by the New England Journal of Medicine.
  - 53% of those injuries involved high-risk personnel.
- 51 to 77% is the number of sharps injuries caused by suture needles.



Sharp-tip suture needles are **the leading source** of penetrating injuries to the skin for surgical personnel.

#### *Your Risk of Exposure*

As an employee who works blood and bodily fluids, you should know that penetrating injuries to the skin, also known as percutaneous injuries, could result in exposure to bloodborne pathogens.

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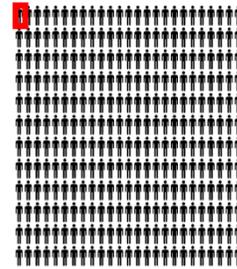
Your chances of exposure to just three of the bloodborne pathogens are shown below.



Chances of exposure to Hepatitis B (HBV) if you are **not** vaccinated



Chances of exposure to Hepatitis C (HBC)



1 in 300 chances of exposure to HIV

## Awareness

### Focus!

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

### *When Most Injuries Occur*

The key to avoiding needlesticks is awareness. Below are places where suture needle injuries frequently can occur.

- Loading or repositioning the needle into the needle holder
- Passing the needle hand-to-hand between team members
- Sewing toward the surgeon or assistant while the surgeon or assistant holds back other tissue
- Tying the tissue with the needle still attached
- Leaving the needle on the operative field
- Putting needles in an over-filled sharps container
- Placing needles in a poorly located sharps container



Figure 1 - load suture needles carefully



Figure 2 - never overfill a sharps container

### *Avoiding Injury and Exposure*

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

1. Eliminate and reduce the use of needles and other sharps wherever possible.
2. Practice good housekeeping.
  - a. Ensure that sharps are **never** left unattended anywhere for any reason!

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- b. Isolate the hazards and use engineering controls<sup>1</sup>.
  - c. Always place used or exposed sharps in a sharps container. Never overfill a sharps container. To do so may cause injuries and exposure to others.
3. Wear the appropriate PPE<sup>2</sup>.
- a. Don gloves! While gloves do not protect you from needle pricks, they can provide an extra layer of protection.
  - b. Wear a clean, buttoned lab coat.
  - c. Put on splash goggles (if there is a possibility of a splash).
4. Handle all sharps, including broken glass, with care.
5. Educate those you work with daily.
- a. Train those new to the team. Review your safe practices/engineering controls often.
  - b. Ensure the daily use safe work practices to reduce sharps hazards in the workplace.
  - c. Discuss new and safer methods of handling sharps and avoiding exposure to bloodborne pathogens.

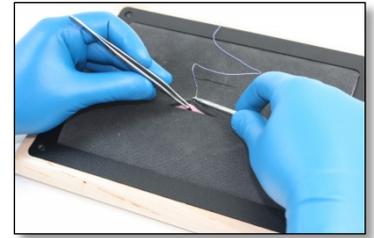


Figure 3 - practice suturing techniques often

## In Case of Exposure

### ***What to Do IF You Are Exposed***

Immediately upon exposure to Human Blood or Other Potentially Infectious Materials (OPIM):

- Wash affected areas with soap and water
- Flush mucous membranes with water
- Notify your supervisor immediately
- Contain any spilled material

Consult with your supervisor and fill out the required [Incident Report Form](#).

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<sup>1</sup> Engineering controls eliminate or reduce exposure to bloodborne pathogens through the use of or substitution of engineered machinery or equipment (e.g., blunt suture needles).

<sup>2</sup> The required minimal PPE in most areas includes a clean, buttoned lab coat or disposable gown and the appropriate gloves. Different areas have varying requirements. Please ask if you are unsure.

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### *To Receive Additional Care*

If a potentially exposed employee reports the exposure within 48 hours of the incident, he or she can receive at no cost:

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

## Options

### *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 (shown here), which is the sheet or band of fibrous connective tissue enveloping, separating, or binding together muscles, organs, and other soft structures of the body.



Figure 4 – fascia is the cobweb like material shown here



Figure 5 - Blunt suture needle

However, blunt suture needles are sharp enough to pierce muscle and fascia, but not sharp enough to prick the skin. For more information about blunt suture needles, click [here](#):

### *Making a Decision*

If you or your area decide 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. Make sure that you document and file the change as well as the subsequent training.

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 and placed in your files.