

# Handling and Disposing of Needles

## 1. SCOPE

This guidance document on Handling and Disposing of Needles covers all procedures that use needles. This includes but is not limited to: blood draws, injections into humans and animals, injecting chemicals or cells into an instrument such as an HPLC, etc.

“Sharps” is a common term for devices with sharp points or edges that can puncture or cut skin.

Examples of sharps include:

- Needles – hollow needles used to inject drugs (medication) under the skin
- Syringes – devices used to inject medication into or withdraw fluid from the body
- Lancets, (also called “fingerstick” devices) – instruments with a short, two-edged blade used to get drops of blood for testing. Lancets are commonly used by diabetics to test blood sugar levels.
- Auto Injectors, including epinephrine and insulin pens – syringes pre-filled with fluid medication designed to be self-injected into the body
- Infusion sets – tubing systems with a needle used to deliver drugs to the body.
- Connection needles/sets – needles that connect to a tube used to transfer fluids in and out of the body. This is generally used for patients on home hemodialysis.



## 2. PURPOSE

To provide guidance to ensure faculty, staff and students are able to safely handle and dispose of sharps for human, in vitro, and in vivo models.

## 3. BACKGROUND

One of the leading means of exposures to biological materials is needle sticks. At

UBC approximately 10% of all Health Care related incidents are associated to needle sticks.

Used needles and other sharps are dangerous to people and pets if not disposed of safely because they can injure people and spread infections that cause serious health conditions. The most common infections in health care are:

- Hepatitis B (HBV),
- Hepatitis C (HCV), and
- Human Immunodeficiency Virus (HIV).

However, in the research environment, the risk may be associated to the hazardous chemical or biological being studied or utilized in the experiment. It is critical for those using sharps to understand, not only the risks of the sharps themselves, but the other experimental hazards.

Never place loose needles and other sharps (those that are not placed in a sharps disposal container) in public trash cans or recycling bins, and never flush them down the toilet. This puts trash and sewage workers, janitors, housekeepers, and the public at risk of being harmed.

#### 4. RESPONSIBILITY

Prior to working with any biological materials, every worker must be appropriately trained on the physical requirements and operational practices specific for the work being performed.

It is the responsibility of the supervisor to ensure that workers are aware of:

- Risks associated with the materials and tools that they are working with
- The methods, documents, and engineering controls needed to mitigate the risks of the materials/tools being handled.
- Appropriate decontaminant that is effective against any hazardous materials, and the appropriate waste streams are followed.

It is the responsibility of the worker/student to ensure:

- Familiarity with the hazards and SOPs related to working with sharps in the work space
- Prompt reporting of any accidents or unsafe conditions to their supervisor

All training must be documented in accordance to WorkSafeBC, CFIA and PHAC regulations.

## 5. MATERIALS/EQUIPMENT

Sharps container  
Needles (where possible)

## 6. PERSONAL PROTECTIVE EQUIPMENT

Please follow the PPE requirements for the facility where the work is occurring, and as mandated in the approved Human Ethics, Animal Ethics, or Biosafety Permits.

## 7. PROCEDURE

### 7.1 SHARPS INJURY PREVENTION

Only use needles - or other sharp instruments - when there is no alternative, such as for parenteral injection or phlebotomy. Plasticware should be substituted for glassware whenever possible.

- Do not bend, shear, break, or re-cap needles from disposable syringes, or otherwise manipulate by hand before disposal; rather, place carefully in the conveniently located sharps container.
  - In the rare event it is necessary to recap a needle, use a device designed to recap needles or the one-handed method (outlined in this guidance)
  - If it is necessary to remove an uncapped needle from a syringe it is recommended to use a device such as the sharps container or forceps to separate the needle from the syringe. Do not attempt to remove an unprotected needle from any device with your hands.
- Syringes which re-sheath the needle, needle-less systems, and other safety devices should be used when possible.
- If reusable glass syringes and needles are necessary, examine syringes for chips or cracks and needles for barbs and plugs prior to sterilization and before use. Disposable syringes and needles are preferred.
- Procedure-specific handling and disposal of sharps must be included in your lab's written Lab Safety Manual or Standard Operating Procedures.
- Do not pick up broken glass with hands, use mechanical means such as a brush and dustpan, tongs, or forceps.
- Perform an annual review of your lab's use of sharps. Is it possible to modify a procedure so sharps are not needed?

## 7.2 SPRAY AND AEROSOL PREVENTION

To prevent exposure from sprays and aerosols:

- Use of luer lock syringes is recommended.
- Fill syringes carefully to minimize air bubbles and frothing. Expel excess air, liquid and bubbles from the syringe vertically away from your eyes, nose and mouth.
- Do not forcefully expel a stream of fluid into an open vial or tube.
- When working with infectious, toxic or other dangerous materials, use engineering controls, such as a biosafety cabinet, plastic shield and/or appropriate PPE.

## 7.3 RE-USE OF NEEDLES

If there is no alternative to re-using a needle/syringe for a specific procedure:

- Avoid re-capping the needle by placing the needle/syringe in a tray or other protective container for transportation or storage between injections.

If there is no alternative to re-capping the needle:

- First choice should be a re-sheathing needle, available as:
  - Re-usable, retractable guards (example: Gettig, <http://www.gettig.com/guard.html>) or
  - Automatic re-sheathing styles (example: Sterimatic, <http://www.sterimatic.com/>)



- Second choice is to use a simple and inexpensive mechanical device to safely hold caps while re-capping.
  - This device from Medi-Dose sits on a bench top and holds the cap while the syringe/needle is inserted. Twist the needle/syringe to remove from the device. <http://www.medidose.com/needlesafeii-4.aspx>



- Finally, if the above re-sheathing or mechanical re-capping devices do not work for an application, the one-handed scoop method may be used. Documentation must demonstrate that the above-mentioned techniques cannot be implemented.
  - Place the cap on the counter top and "scoop" it up with the needle, keeping your free hand out of the way.



## 7.4 SHARPS DISPOSAL

Please refer to the [Hazardous Waste Disposal Guide](#).

## 7.5 IN CASE OF NEEDLE STICK OR BROKEN SKIN FROM OTHER SHARPS

If you are accidentally stuck by another person's used needle or other sharp:

- Wash the exposed area right away with water and soap or use a skin disinfectant (antiseptic) such as rubbing alcohol or hand sanitizer.
- Do NOT induce bleeding.
- Notify your supervisor.
- Seek immediate medical attention by visiting either urgent care, emergency room, or your personal physician.
- Report the incident/accident by going to the following site:  
[www.cairs.ubc.ca](http://www.cairs.ubc.ca)

Follow these same instructions if you get blood or other bodily fluids in your eyes, nose, mouth, or on your skin.

## 8. REVIEW AND RETENTION

This SOP is reviewed annually or whenever deemed necessary by the responsible departmental representative in Safety & Risk Services.

## 9. DOCUMENT APPROVAL SIGNATURES

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