

Mercury Spillage
Blood Spillage
Needle stick injury

Mercury spillage policy

- **Use of Mercury :-**
- Mercury is a major component of dental amalgam
- Material used by dentists to fill irregular cavities in teeth.
- Used in thermometer, barometer, manometer, and sphygmomanometer
- Ethylmercury is used as a preservative in some vaccines

Cause of Mercury poisoning/hazard

- People are mainly exposed to methylmercury, when they eat fish and shellfish
- Broken fever thermometer in mouth
- Silver dental fillings
- Exposure to toxic air in industrialized communities

Hazard of Mercury

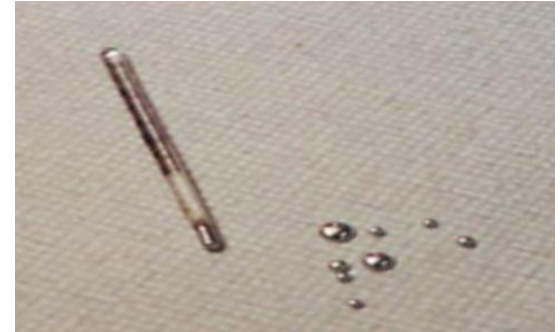
- Nervous system
 - Irritability
 - Memory problems
 - Confusion – delirium
 - Muscle weakness
 - Numbness
 - Hearing and speech difficulties
- Digestive system
 - Peptic ulcer
 - Peptic perforation
- Respiratory systems
 - Mercury fume - breathlessness
- Threat to the development of the child in utero

Component of Mercury Spillage kit

- Mercury absorbent
- Absorbant powder
- Safety goggles
- Latex gloves
- Mercury cleanup wipes
- Dust pan
- Hand boom
- Disposal bag

Process of cleaning mercury spillage:-

- Remove the broken thermometer
- Wrap broken thermometer
- Dispose as per BMW rule.
- Collect the mercury globules together with the scoope
- Using the syringe, pick up a mercury and place it in waste plastic bottle.



Process of cleaning mercury spillage:-

- Cover the spillage area with powder
 - calcium hydroxide
 - sulphur
- By using scoope, mix powder with spilt mercury.
- Brush the contaminated powder into the scoope and place it into waste container
- And cap the container tightly and can be kept safely.
- Dispose of waste material in the incineration waste stream.



BLOOD SPILLAGE POLICY

- Spillage of blood or other body fluid present a risk of disease transmission to laboratory workers.
- Blood spillage may occur due to
 - laboratory sample breaks in the phlebotomy area
 - during transport of clinical sample
 - excessive bleeding during the procedure.

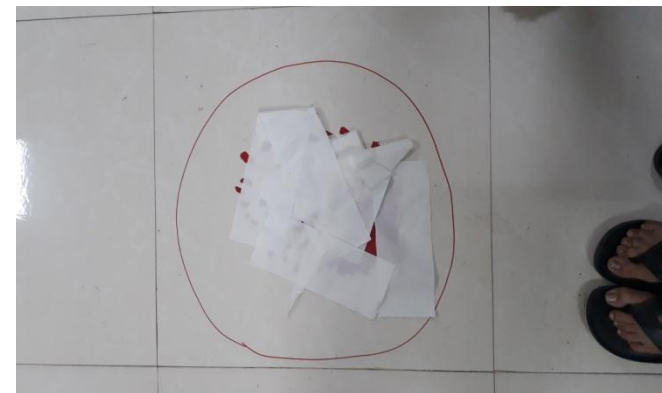
Spillage Kit

- Leak proof yellow bag
- Yellow container for disposal of waste material
- Scraper and Pan to collect spills
- Rubber / Heavy duty gloves
- Lab coat
- Paper to soak spillage
- Safety glasses for eye protection
- 1% Sodium hypochlorite
- Non sterile gloves



Procedure to Manage Blood Spillage

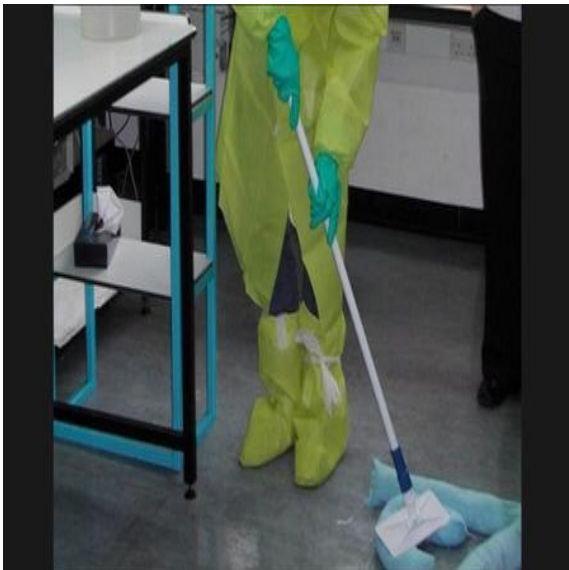
- Cover area of spillage with “CAUTION BOARD”
- Or Mark the spillage area with marker
- Use tongs or a pan and brush to sweep up as of broken glass as possible.
- Do not pick up pieces with your hands.
- Absorb blood or body fluids using disposable paper towels



- Commercially 4-5 % HOCL is available
- Take freshly prepared 1 % sodium hypochlorite.
 - Preparing hypochlorite solution
 - Dilution 1:4
 - For 1 litre solution,
 - 200ml sodium hypochlorite + 800ml water
- Pore 1 % HOCL on spillage area
- keep it for 20 minute
- with “CAUTION BOARD”



- After it take the blood absorbed towel/cotton and discard in yellow container
- Remove gloves and discard them.
- Wash hands carefully with soap and water.



Needle Stick Injury Policy

- NSI occurs when the skin is accidentally punctured by a used needle, which has been in contact with blood, tissue or other body fluids before the exposure.
- **NSI lead to transmission of –**
 - blood borne diseases
 - HBV, HCV, HIV



- **Risk to Needle Stick Injury**
 - Laboratory technician
 - Health care workers
 - Surgeons & Surgical staff
 - Bio-Medical Waste (BMW) collectors
 - Nursing staff

Causes of Need Stick Injury

- Most frequently during and after blood collection
- **During recapping of needle**
- During removal of needle from phlebotomy holder
- Carrying blood / fluid collected syringe with needle.
- Disposal system failures –
 - **over-filling of white plastic containers with needle**
 - needles sticking out of containers
- Patients movement (children)

Management of NSI

- Stop the procedure immediately
- Wash injured area gently with running tap water & soap as soon as possible
- Don't apply pressure to wound
- Allow it to bleed freely
- Apply an antiseptic and a clean dressing
- Contact medical office / local doctor / hospital emergency department within 24 hrs for further management.
- Collect patient blood sample for evaluation
- Dispose of the needle safely.

Prevention:-

- Safe disposal of needle in white plastic puncture proof container
- Discard Plastic container as it fill up $2/3$ of it's size.
- Use special needle with needle cover & lock system as well as easily needle detachable system for blood collection.





**LOSING THIS
MUCH BLOOD
WON'T KILL
YOU.**

**RECEIVING
THIS MUCH
COULD.**





Be Needle Smart

- Do **NOT** recap*
- Do **NOT** bend*
- Do **NOT** remove*
- Do **NOT** transport*
- Do **NOT** re-use*

THANK YOU