UNIT 9 PRACTICING UNIVERSAL PRECAUTIONS

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9.0 INTRODUCTION

In Theory Course, Block 1, Unit 3 we have already discussed Safe practices in First Aid. By this time we hope that you will appreciate the importance of safety for a first aid provider. You will also understand that infection control and prevention is indispensable for you as a First aid Provider. You have also learnt that putting yourself at unnecessary risk is not a good thing and hence, you must take whatever precaution you can to safeguard your health against infection. Being careless in terms of safety practices is hazardous not only for you but also for the person you are helping. No one wants a first aid provider to bandage wounds and cause cross infection of serious life threatening illnesses. This practical unit provides you with information on procedures necessary to prevent infection in emergency first aid care.

9.1 OBJECTIVES

At the completion of this unit, you will be able to:

- demonstrate hand washing technique;
- select and use appropriate Personal Protective Equipment; and
- practice safe practices while providing first aid.

9.2 PROCEDURE FOR HAND-WASHING

Hand washing helps to free the hands from infection. It is important to wash hands before and after any first aid care provided or if you have
done any procedure or given any emergency care. In this section, we will see the steps of procedure for hand washing.

**Articles Required**

The articles required are as follows:

1. An adult volunteer
2. Soap for Handwashing, water source/supply, Towel to dry the hands.

**Procedure:**

**Step 1** Ask the volunteer to act as a first aid provider.

**Skills:** First aid Provider must wash hands before any procedure.

**Step 2** Remove wrist watch or any jewelry that comes in way of giving care before the procedure.

**Skills:** Removing wrist watch and jewelry helps to protect them and avoid cross-infection.

**Step 3** Stand by the side of the sink in a comfortable position.

**Skills:** Water should be warm as cold water will not form enough lather to wash the hands properly.

**Step 4** Open the tap and let the water fall down.

**Skills:** Water should flow from forearms to hands while doing so.

**Step 5** Wet your hands and close the tap.

**Step 6** Apply/Rub soap thoroughly on hands and wrists.

**Step 7** Rinse the soap with water and return to its place.

**Step 8** Rub the soap while rubbing palm to palm.

**Skills:** This is first step of hand washing. It helps to spread the lather over the hands.

**Step 9** Now, keep right palm over upper part of left hand and scrub thoroughly. Keep the left palm over back of right hand and rub the lather over it.

**Skills:** This is second step of hand washing. This helps to spread the lather over the back of hands and palms.

**Step 10** Vigorously rub hands together, palms facing each other and fingers interlaced.

**Skills:** This is third step of hand washing. This helps to spread the lather in between the fingers.

**Step 11** Interlock fingers and scrub the backs of fingers on both hands.

**Skills:** This is fourth step of hand washing. This helps to spread the lather over fingers of both hands and remove dirt and infection over this area.

**Step 12** Rub the thumb of both hands by rotational rubbing of right thumb in left palm and of left thumb in right palm.

**Skills:** This is fifth step of hand washing.
Step 13 Rub the clasped fingers of right hand in left palm by rotational rubbing in backward and forward movement. Repeat for other hand.

**Skills:** *This is sixth step of hand washing.*

Step 14 Open the tap and wash your hands under the tap water.

Step 15 Dry your hands with towel.

Refer Fig. 9.1 below for the six steps of handwashing.

![Fig. 9.1: Six steps of Handwashing](image)

Thus, these are the six steps which are to be followed for the proper hand washing.

9.3 **PROCEDURE FOR WEARING GLOVES**

In this section, we shall discuss the procedure for wearing gloves. Gloves are important personal protective equipments which protect hands. It is important to know how to wear and how to remove each type of gloves properly. Here, we will discuss these procedures.

**Articles Required**

The articles required are as follows:

1. An adult volunteer
2. Packet of Disposable gloves—Clean and sterile gloves.

**Procedure:**

**a. For putting on the gloves**

Step 1 Ask the volunteer to act as a first aid provider.
**Practicing Universal Precautions**

**Step 2**  
Do hand washing as given in previous section 9.2 on hand washing.

**Skills:**  
Do all the steps as given in procedure for hand washing and dry your hands thereafter.

**Step 3**  
Open the packet of gloves. Notice the way in which the gloves have been placed.

**Skills:**  
Glove is placed in its packet with right glove on your right side and left glove on your left side. The inner side of the glove is considered unsterile but the outer side of glove is considered to be sterile. The folded portion of the gloves is called the cuff which is folded in such a way that the inner part of gloves is on outer side of cuff and the sterile part is on the inner side of the cuff (Fig 9.2).

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**Fig. 9.2: Parts of Gloves**

**Step 4**  
Grasp one glove by its cuff with fingers of opposite hand. This is the first glove.

**Skills:**  
If you want to wear the right glove first, hold cuff in left hand and if you want to wear the left glove, hold the cuff with right hand.

**Step 5**  
Pull the glove up on the hand and wear the glove.

**Skills:**  
Donot hold the glove from anywhere else but only from outer side of cuff to avoid making the other parts of glove unsterile.

**Step 6**  
Now slip this gloved hand in the inner side of the cuff of the second glove.

**Step 7**  
Slip your second hand in this second glove and pull the glove forward.

**Step 8**  
Slip the fingers and the hand completely into the gloves.
Step 9  Complete the gloving procedure.

Refer Fig. 9.3 for the procedure of wearing gloves.

Fig. 9.3 : Wearing Gloves

b. For removing the gloves

Step 1  Ask the volunteer to act as a first aid provider.

Step 2  Grasp the glove in one hand from outer side with your other gloved hand.

Skills: Now, the outer side is contaminated and inner side is sterile after giving care. So, removing gloves like this helps to avoid contamination of hand.

Step 3  Pull the glove on itself to remove the glove (Fig. 9.4).

Fig. 9.4: Removing first glove
**Step 4** Grasp the inner side of the second glove with ungloved fingers of the first hand from outer side.

**Skills:** *This helps to avoid contamination of hands/fingers.*

**Step 5** Pull the glove off your hand by turning it inside out.

**Step 6** Discard the gloves.

**Step 7** Perform hand washing.

Refer Fig. 9.5 for the procedure of removing gloves.

**Safety and Precautions:**

- Outside of gloves are contaminated.
- If your hands get contaminated during glove removal, immediately wash your hands.

Thus, these are the steps of procedure which are to be followed for the wearing and removing gloves.

### 9.4 PROCEDURE FOR WEARING GOWN/APRON

In this section, we will discuss the procedure for wearing and removing gown. Gowns or aprons protect the skin and clothing.

**Articles Required**

The articles required are as follows:

1. An adult volunteer
2. Gown/apron.

**Procedure:**

**a. For putting on the gown**

**Step 1** Ask the volunteer to act as a first aid provider.

**Step 2** Do hand washing as given in previous section 9.2.

**Skills:** *Do all the steps as given in procedure for hand washing and dry your hands thereafter.*
**Step 3**  Pick up a clean gown.

**Step 4**  Hold the gown from its upper part (neck) and let it unfold downward (Fig. 9.6).

**Skills:** *This will help to open the gown.*

![Fig. 9.6: Holding the gown](image)

**Step 5**  Hold the gown from inside and slip one arm into the other sleeve on same side.

**Skills:** *This will help to wear the gown from one side.*

**Step 6**  Hold the opposite sleeve with your gown covered hand and pull the sleeve on the opposite arm and shoulder.

**Skills:** *This will prevent touching the gown to avoid its contamination.*

**Step 7**  Now, pull up the gown over the arm and shoulder of the opposite sleeve with gown covered hand (Fig. 9.7).

![Fig. 9.7: Wearing the gown](image)

**Step 8**  Fasten the ties at the neck and back (Fig. 9.8).

![Fig. 9.8: Fasten ties at neck and back](image)
b. Removing the gown

Step 1  Ask the volunteer to act as a first aid provider.

Step 2  Unfasten the ties at the back first.

Step 3  Do hand washing as given in previous section 9.2

Skills: Do all the steps as given in procedure for hand washing and dry your hands thereafter. The ties below the neck line are considered contaminated, so hand washing after unfastening the ties is important.

Step 4  Unfasten the neck ties.

Skills: Do not touch the outside of gown as it is contaminated after the use.

Step 5  Place your fore-finger under the cuff of the sleeve and pull the sleeve down with gown covered hand.

Step 6  Hold the opposite sleeve with your gown covered hand and pull the sleeve on the opposite arm and shoulder down.

Skills: Step 5 and step 6 will prevent touching the gown directly to avoid contamination of hands.

Step 7  Now, slip the gown off.

Step 8  Hold the gown with both hands at the shoulder seam and turn inside out.

Step 9  Bring the hands together and roll the gown.

Step 10  Discard the gown.

Step 11  Perform Handwashing.

Refer Fig. 9.9 for the procedure of removing gown.

Fig. 9.9: Removing Gown

c. For Putting the apron on

Step 1  Ask the volunteer to act a first aid provider.

Step 2  Do hand washing as given in previous section 9.2.

Skills: Do all the steps as given in procedure for hand washing and dry your hands thereafter.
Step 3  Pick up a clean apron.

Step 4  Hold the apron from its upper part (neck) and let it unfold downward.

**Skills:** This will help to open the apron.

Step 5  Hold the apron over the body.

Step 6  Fasten the ties at the neck and back.

d. Removing the apron

Step 1  Ask the volunteer to act a first aid provider.

Step 2  Unfasten the ties at the back first.

Step 3  Do hand washing as given in previous section 9.2.

**Skills:** Do all the steps as given in procedure for hand washing and dry your hands thereafter. The ties below the neck line are considered contaminated, so hand washing after unfastening the ties is important.

Step 4  Unfasten the neck ties.

Step 5  Now, slip the apron off.

Step 6  Discard the apron.

Step 7  Perform Handwashing.

Safety and Precautions

- Gown’s front and sleeves are considered to be contaminated.
- If your hands get contaminated during gown removal, immediately wash your hands. Unfasten gown ties, taking care that sleeves don’t touch your body when reaching for ties.
- As you are removing the gown while wearing gloves, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands.

Thus, these are the steps of procedure which are to be followed for the wearing and removing a gown and an apron.

9.5 PROCEDURE FOR WEARING OTHER PERSONAL PROTECTIVE EQUIPMENTS

In this section, we will discuss the procedure for wearing and removing mask and goggles/face shield.

Articles Required

The articles required are as follows:

1. An adult volunteer.
2. Goggles/Mask and Face shield.
Procedure:

a. **For wearing the mask** (Fig. 9.10)

**Step 1** Ask the volunteer to act as a first aid provider.

**Step 2** Do hand washing as given in previous section 9.2.

**Skills:** *Do all the steps as given in procedure for hand washing and dry your hands thereafter.*

**Step 3** Take the mask.

**Step 4** Hold it by its strings/ties to avoid touching the mask area from inside.

**Skills:** *This will help to prevent contamination on inner side which has to come in contact with your face.*

**Step 5** Bring it close over nose and mouth.

**Step 6** Pass top strings of the mask over your ears and fasten them behind the head.

**Step 7** Now, pass the lower strings around the neck and fasten at the back of head at the neckline.

**Step 8** Wear the mask for the procedure.

![Fig. 9.10: Wearing the mask](image)

b. **Removing the mask** (Fig. 9.11)

**Step 1** Ask the volunteer to act as a first aid provider.

**Step 2** Do hand washing as given in previous section 9.2.

**Skills:** *Do all the steps as given in procedure for hand washing and dry your hands thereafter.*

**Step 3** Unfasten the lower strings/ties first and then the upper ties/strings.
Step 4  Hold it by its strings/ties and fold the mask in half.
Step 5  Discard the mask.

![Fig. 9.11: Removing the mask](image)

c. Wearing Goggles/face shield  (Fig. 9.12)

Step 1  Ask the volunteer to act a first aid provider.
Step 2  Do hand washing as given in previous section 9.2.
Step 3  Take the goggles/face shield.
Step 4  Hold it by its strings/ties/strap and don’t touch from inside.

**Skills:** *This will help to prevent contamination on inner side which has to come in contact with your face.*

Step 5  Bring it close over eyes/face.
Step 6  Place over face and eyes and adjust to fit.

![Fig. 9.12: Wearing goggles/face shield](image)

d. Removing Goggles/face shield  (Fig. 9.13)

Step 1  Ask the volunteer to act a first aid provider.
Step 2  Do hand washing as given in previous section 9.2.
Step 3  Unfasten the strap/head band/strings/ties.
Step 4  Lift the equipment up and out.
Step 5  Discard or place in a designated place if reusable.
Safety and Precautions

- Perform Hand - Washing whereever required especially after removing these PPE.
- Outside of goggles or face shield are contaminated.
- Front of mask/respirator is contaminated — DO NOT TOUCH it.
- If your hands get contaminated during removal of goggle or face shield/mask, immediately wash your hands or use an alcohol-based hand sanitizer.

Thus, these are the steps of procedure which are to be followed for the wearing and removing a mask and goggle/face shield.

9.6 PROCEDURE FOR HANDLING BLOOD SPILLS

Blood may spill at the site of emergency involving injuries or wound to any part of body. The infection can spread by blood which includes diseases like hepatitis / HIV/AIDS which are commonly spread by infected blood because you as a first aid provider donot know the health status of the other person. Thus, you must know how to handle the blood spills. The procedure is discussed in this section.

Articles Required

The articles required are as follows:

1. An adult volunteer.
2. Goggles/Mask and Face shield.

Procedure:

Step 1  Ask the volunteer to act a first aid provider.

Skills: Do all the steps as given in procedure for hand washing and dry your hands thereafter.

Step 2  Do hand washing as given in previous section 9.4.

Step 3  Tell the on-lookers not to enter the area where the blood has spilled and not to touch the blood.

Step 4  Slip on the disposable gloves as discussed in section 9.3 of this unit. You can also wear other PPE as required.

Skills: To prevent against cross-contamination.
Step 5  Wipe up the spill using paper towels or absorbent material (Fig 9.14).

![Fig. 9.14: Clean the blood spill with absorbent cloth](image)

Step 6  Place this absorbent material in plastic garbage bag or waste collection bag or any polythene available (Fig. 9.15).

**Skills:** *In emergency use paper rolls or stray, non-usable cotton cloth pieces, sponge that can fully absorb the blood.*

![Fig. 9.15: Throw the blood soaked absorbent material in waste bag](image)

Step 7  Gently pour bleach solution/detergent solution onto all contaminated areas.

Step 8  Let the bleach solution/detergent solution remain on the contaminated area for 20 minutes.

**Skills:** *20 minutes are good enough for killing any pathogens in the blood.*

Step 9  Wipe up the remaining bleach solution (Fig. 9.16).

![Fig. 9.16: Wipe off the remaining solution](image)

Step 10 Disinfect any non-disposable cleaning materials used such as mops and scrub brushes with bleach solution and then dry in air.

Step 11 Remove gloves and place in plastic garbage bag to discard them.

Step 12 Double-bag these infected clothes and gloves.

Step 13 Securely tie-up plastic garbage bags and discard.
**Step 14** Perform Handwashing after procedure.

Thus, disinfection of blood spills is important and must be done in order to avoid cross-infection through the blood route.

<table>
<thead>
<tr>
<th>Check Your Progress 1</th>
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<tbody>
<tr>
<td>Listed here are some activities that could indicate a need to wear PPE.</td>
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<tr>
<td>What PPE would you wear for the following-</td>
</tr>
<tr>
<td>a. Touching an open wound?</td>
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<td>b. Transporting a patient in wheelchair?</td>
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<td>c. Responding to an emergency where blood is spilling?</td>
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<td>d. Splashes of Blood from injured artery?</td>
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**9.7 LET US SUM UP**

Thus, in this unit we have learnt about hand washing, use of Personal Protective Equipments and their removal and handling spills. The most important things you must remember include:

a. Always be aware of contamination,
b. Work from cleaner to dirtier area,
c. Be aware of the clean and dirty side of the PPE,
d. Remember hand washing works, so don’t think of it as unnecessary,

In the next unit, we will discuss control of bleeding.

**9.8 KEY WORDS**

<table>
<thead>
<tr>
<th>Indispensable</th>
<th>Unnecessary</th>
<th>Risk</th>
<th>Safeguard</th>
<th>Careless</th>
<th>Hazardous</th>
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</thead>
<tbody>
<tr>
<td>Very important or necessary</td>
<td>Not required/wanted</td>
<td>A situation which involves danger</td>
<td>Protect from harm or danger</td>
<td>Not giving sufficient attention</td>
<td>Risky or dangerous</td>
</tr>
</tbody>
</table>
Tap : Device from which water flows out as and when connected to supply
Sterilized : Free something of infectious causing agents
Disinfected : Clean something to destroy disease agents, decontaminate
Sterile : Something that is free from infection
Unsterile : Thing that is full of infection
Contamination : Something that is impure or carrying infection
Slip : Move up or into something
Grasp : Hold firmly
Fold : Bend something over itself
Fasten : Tie
Neckline : At or below neck
Spread : Open out or extend
Disposable : One which is to be thrown away and not reused
Absorb : Soak up
Wipe : Clean or dry
Absorbent : Material that absorbs easily

9.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1
a. Gloves  b. None  c. Gloves, Gown/apron  d. All PPE

9.10 ACTIVITIES

Activity 1
Practice the procedure for wearing and removing gloves.
Record in Log-Book. (Supervised Activity)

Activity 2
Practice the procedure for wearing and removing gown.
Record in Log-Book. (Supervised Activity)

9.11 REFERENCES

1. http://medical.tpub.com/14295/css/Figure-25-Gloving-110.htm
2. https://viraltimes.net/tag/ebola/
UNIT 10 CONTROL OF BLEEDING

10.0 INTRODUCTION

Bleeding if severe can be life threatening emergency. Bleeding/hemorrhage occurs when blood vessels-arteries, veins or capillaries are injured and blood flows out of the body from the injured part. We have already discussed wounds and bleeding in Unit 1 of Block 3 of Theory Course. You already know that when the large blood vessels are damaged severely, severe bleeding can occur. A large amount of bleeding in short time is called hemorrhage. Bleeding can be external or internal. Uncontrolled bleeding is a life threatening emergency and can result in death. In this unit, you will learn how to recognize and provide first aid care for a bleeding victim.

10.1 OBJECTIVES

After completing this unit, you will be able to:

- identify life threatening external and internal bleeding;
- provide first aid in severe bleeding; and
- demonstrate how to control bleeding in emergencies.

10.2 RECOGNIZING BLEEDING

When bleeding occurs externally, you can see the bleeding from the wound. But if it occurs internally in various organs, the blood may either be seen outside the body or may remain inside the body causing various signs and symptoms. In this section, we will discuss how to recognize various types of bleeding.
Purposes

The purpose of this procedure is to recognize the types of bleeding.

Articles required

You will require various flashcards for recognizing various types of Bleeding. You can also discuss various case scenarios for various types of bleeding.

Procedure

Step 1 To recognize external bleeding, we will see that it occurs from the wound which is external and mostly involves skin and lower layers of skin (Fig. 10.1).

![Fig. 10.1: External Bleeding](image1)

Step 2 An External Bleeding can be arterial bleeding which is recognized as rapid and severe bleeding which needs more pressure to control. It occurs in deeper cuts and injuries (Fig. 10.2).

![Fig. 10.2: External Arterial Bleeding](image2)

Step 3 An External Bleeding can be venous Bleeding which is generally easier to control. It occurs when the cuts/wounds/injuries are superficial (Fig. 10.3).

![Fig. 10.3: Venous Bleeding](image3)

Step 4 An External capillary Bleeding is recognized when the capillary is injured or damaged and the blood flows out slowly. It is often described as “oozing” of blood from the wound (Fig. 10.4).
Control of Bleeding

Fig. 10.4: Capillary Bleeding

**Step 5** An Internal Bleeding can be recognized by observing the following symptoms:

- Pale, cold, clammy skin, Discoloration of the skin (bruising) in the injured area (Fig. 10.5).

![Fig. 10.5: Discoloration of ankle in internal bleeding]

- Rapid weak pulse, rapid breathing.
- Thirst, Nausea, vomiting, coughing blood (Fig. 10.6), Bleeding from body opening (Fig. 10.7).

![Fig. 10.6: Vomiting of Blood]  ![Fig. 10.7: Bleeding from Body Opening (Nose)]

- Restlessness, confusion, irritability, Collapse, unconsciousness occurs due to internal bleeding in head.
- Pain abdomen, pain in an area of body, tenderness, melena (black tarry stools due to loss of blood from the stomach), person tries to guard and avoid movement in the area affected.

**Step 6** In case of Ear bleeding, we see blood coming out from the ear for external bleeding (Fig. 10.8 a). In case of internal bleeding, the ear shows change in colour (Fig. 10.8 b).
Step 7 In case of bleeding from nose, we see bleeding coming out from the nose (Fig. 10.9).

Step 8 In case of eye bleeding, it is recognized as bleeding from eye due to injury to eye, eyelid, or eyeball. It is mostly internal (Fig. 10.10).

Step 9 In case of bleeding from Varicose Veins, the redness on the area or bursting of veins with blood loss is seen (Fig. 10.11).

Step 10 In case of Heavy Vaginal bleeding due to menstruation, the victim will verbalize her condition and will represent signs of fatigue and shock.

Thus, in the above steps we learnt how to recognize different types of bleeding. In the next section, we will discuss about assessment of bleeding and first aid in bleeding. So, let’s continue.
ASSESSING A VICTIM HAVING BLEEDING

Firstly you have to ensure that the environment is safe for you and the victim. We have discussed this part in detail in Unit 1 (Recognizing emergencies) of Block 2 of Theory course. After this, the most important thing is to assess whether the victim is unconscious or not and what injury he/she has. In this section, you will learn the skills for assessment of the victim having bleeding.

Purpose

The main purpose of assessing the victim is to conduct assessment and provide first aid for bleeding.

Articles required

For this activity you need to have a volunteer. However, he/she should be explained that they would have to be placed in a specific position by changing the posture.

Procedure

Step 1 Ask the volunteer to act as victim. Ask him/her to lie down on their back.

Skills: The volunteer should lie down comfortably on his back with his hand on the side of his/her body and both the feet straight.

Step 2 Conduct assessment as per the flow-diagram given below

![Flow-diagram for assessing a victim having bleeding]
**Skills:** Perform Primary assessment and monitor any bleeding, injury, wound and check for fracture. Check to find out the requirement of the situation.

**Step 3** In case of bleeding, control the bleeding and do dressing and apply bandage as required.

**Skills:** Dressing has been discussed in detail in next Unit of this Block (Unit 11). Control of Bleeding has been discussed in detail in Section 10.4 of this Unit.

**Step 4** Record and Report the findings and Transport the victim.

Therefore, in this section we learnt the steps of assessment of scene and the victim when the emergency has arisen and when the emergency involves bleeding where it is important to apply the procedure for control of bleeding. Now we will learn about this procedure in the next section. So, let’s proceed.

### 10.4 PROCEDURE FOR CONTROL OF EXTERNAL BLEEDING

In an episode of bleeding one needs to recognize the type of bleeding immediately. While doing so it is important to understand what your actions are as a first aid provider. In this section, we shall be discussing the procedure for control of bleeding that must be applied when controlling the bleeding. The steps are RED-E as discussed in Theory Block 3, Unit 1.

**Articles required**

The required articles are:

1. An adult volunteer to act as victim.
2. Case scenario where the use of these articles is required e.g. injury to limbs with heavy bleeding, cuts, open wound.
3. First Aid Box.
4. The standard articles required are dressing, triangular or roller bandages, Adhesive/ Sterilized bandages, dressing, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, tourniquet/binder as required, etc.

Improvised articles can be used as discussed in Unit 6 of this Block on “First Aid with Improvisation”.

**Steps of Procedure for External Bleeding**

**Step 1** Wash the hands.

**Skills:** This is important to prevent cross contamination. After this conduct assessment as given in section 10.3 of this unit.

**Step 2** Make the victim or volunteer to sit or lie down.

**Skills:** The volunteer/victim should be made to lie down to prevent fainting. This is the first step (Rest).
Step 3 Wear Gloves if available.

**Skills:** The procedure for wearing gloves is discussed in Unit 9 of this Block.

Step 4 Remove the clothing around the wound/injured part/bleeding area by cutting the clothing as necessary to expose the wound. (Fig. 10.12). You can tear open the clothes also (Fig. 10.13) to expose the wound. This is the second step (Expose).

![Fig. 10.12: Cut open the cloth](image1)

![Fig. 10.13: Tear open the clothes](image2)

Step 5 Notice the type of wound and the bleeding occurring.

**Skills:** Superficial wounds generally have venous or capillary bleeding and the deeper wounds generally are accompanied by arterial bleeding.

Step 6 Apply direct pressure by pressing hard on the wound with your finger or palms by placing a sterile dressing or any clean cloth such as – towel or handkerchief till bleeding is controlled. Do this for 5-15 minutes (Fig. 10.14). This is the third step (Direct pressure).

![Fig. 10.14 a: Apply Pressure on arm](image3)

![Fig. 10.14 b: Apply Pressure on leg](image4)

In Case nothing is available use the person’s own shirt material available at that time for applying pressure to the wound to stop bleeding.

**Skills:** Pressure placed on a wound restricts the blood flow through the wound and allows normal clotting to occur.

Step 7 Elevate and support the injured area/extremity above the level of victim’s heart, it will slow the flow of blood and encourage clotting (Fig. 10.15). This is the fourth step (Elevate).

**Skills:** This helps to direct the blood supply back to heart for pumping to the vital organs and hence, reduces the loss of blood. You can either hold the extremity high to raise the injured area or place it on chair, pack of books, pillows or anything that can raise the extremity.
Step 8  If the bleeding stops with pressure in 5 to 15 minutes, it is venous bleeding.

Skills: The bleeding from veins is usually not severe as veins are superficial and hence, stops with little pressure application continued for 5-15 minutes.

Step 9  If the bleeding does not stop, it is arterial bleeding. If this bleeding is severe and is not stopping even after 15 minutes of application of pressure, raise the injured part as high as possible and apply tourniquet immediately, above the wound. (Fig. 10.16).

Skills: Application of tourniquet has been discussed in Unit 3 of this Block. Improvisation for tourniquet is discussed in Unit 6 of this block. Tourniquet is applied when the danger of loss of life exists in severe bleeding episodes.

Step 10  After bleeding is controlled, apply secure dressing with a firm bandage that is tight enough to maintain pressure, but not so tight that it impairs circulation (Fig. 10.17).

Skills: If blood soaks through the bandage, add more pads and bandage to help absorb blood. Do not reuse any blood soaked pads because doing so can interfere with blood clotting process.
Step 11 Help casualty to lie down covered in a blanket, if available to protect from the cold (Fig. 10.18).

Step 12 Check for Shock. If you suspect shock is developing, raise and support his/her legs so that they are above the level of heart (Fig. 10.18).

Skills: Shock has been discussed in Unit 5 of Block 4 of Theory course and Unit 13 of Block 2 of Practical Course.

Step 13 Conduct Secondary Assessment i.e. monitor and record vital signs – level of response, pulse, breathing, watch for sign of shock, check dressing for seepage, check the circulation beyond the bandage.

Step 14 Record and Report.

Step 15 Transport the victim.

Safety and Precautions

- Use tourniquet only if the bleeding is severe and cannot be controlled by pressing directly on the wound.
- Apply all the safety precautions for use of tourniquet as discussed in Unit 3 of this Block.
- If bleeding is severe, check for shock and raise the feet and lower the head.
- Avoid putting animal feces or mud on the wound as it may cause dangerous infection.
Thus, in the above steps we learnt the procedure for controlling external bleeding. In the next section, we will discuss about control of internal bleeding. So, let’s continue.

10.5 PROCEDURE FOR CONTROL OF INTERNAL BLEEDING

In this section we will discuss the steps of procedure for control of internal bleeding. We know that internal bleeding occurs in body cavities which can not be seen outwardly with no external sign and symptoms. When you come across the victims with internal bleeding you are expected to make a quick assessment. Observe for shock and the type and pattern of internal bleeding. Also see the various sign and symptoms like signs and symptoms of shock, coughing of blood, presence of Dark, tarry stool - blood in stools and/or blood in urine. Then, provide first aid care as discussed below.

Articles required

The required articles are:

1. An adult volunteer to act as victim
2. Case scenario where the use of articles is required e.g. fractures, knife /bullet wounds, crush injuries, organ injuries and so on.
3. First Aid Box
4. The standard article required is dressing, triangular or roller bandages, blanket, chair or any material to raise the legs of victim.

Steps of Procedure for Internal Bleeding

Step 1 Wash the hands.

Skills: Important to prevent cross-contamination.

Step 2 Make the victim or volunteer to lie down on flat surface.

Skills: The volunteer/victim should be made to lie down to prevent fainting. After they conduct assessment as given in section 10.3.

Step 3 Raise the victim’s legs if no other external injuries are there which make can it difficult to do so.

Skills: Helps to direct the blood towards heart.

Step 4 Maintain body temperature by covering with blankets.

Skills: Blankets help to provide warmth in case of shock.

Step 5 Place a cold or ice pack covered in towel or ice on the area of suspected injury.

Skills: Ice or cold pack helps to decrease the swelling and blood collection at that area by helping to constrict blood vessels and reducing the supply of blood in that area.

Step 6 Conduct Secondary assessment i.e. monitor and record vital sign – level of response, pulse, breathing, watch for sign of shock, check dressing for seepage, check the circulation beyond (below) the bandage.

Step 7 Record and Report.
Step 8 Transport the victim.

Safety and Precautions

- If serious injury is suspected call for help immediately. Transport the victim rapidly to the hospital as he/she may require immediate surgery.
- Decrease the victim’s fear and anxiety by giving psychological support and reassurance.
- Keep the victim from getting chilled or overheated.
- Do-not give victim anything to eat or drink.

Thus, in the above steps we learnt the procedure for controlling internal bleeding. In the next section, we will discuss about control of bleeding in various situations. So, let’s continue.

10.6 PROCEDURE FOR CONTROL OF BLEEDING IN VARIOUS CONDITIONS

In this section we will discuss the steps of procedure to control bleeding in various situations like ear, nose, eye and bleeding from varicose veins. The initial steps in all these cases is to conduct assessment as discussed in Section 10.3 of this Unit and then proceed further.

Articles required

The required articles are:

1. An adult volunteer to act as victim.
2. Case scenario where the use of articles is required e.g. eye bleeding, nose bleeding, ear bleeding, heavy bleeding in menstruation and bleeding from varicose veins.
3. First Aid Box
4. The standard articles required are dressing, triangular or roller bandages, Adhesive/ Sterilized bandages, dressing, scissors, safety pins, adhesive tape, Antiseptic lotion, cotton, disposable hand gloves, waste bag, blanket, chair or any material to raise the legs of victim.

Steps of Procedure for control of Nose Bleeding

Step 1 Wash the hands and put on gloves if required.

Skills: Important to prevent cross-contamination.

Step 2 Make the victim/volunteer to sit with head down.

Step 3 Ask to spit the blood out through mouth.

Step 4 Loosen any tight clothing around the neck and chest like tight shirt or tie or chunni.

Step 5 Ask the casualty to breathe through mouth and pinch soft part of the nose firmly for 10 minutes or until the bleeding stops (Fig. 10.19).
**Fig. 10.19: Pinch the nose**

**Steps of Procedure for control of Eye Bleeding**

**Step 1** Wash the hands and put on gloves if required.

**Step 2** Make the victim/volunteer to sit.

**Step 3** Tell casualty not to move his/her head or blink the injured eye. Tell him not to rub his/her eyes.

**Skills:** This helps to avoid further injury to eye.

**Step 4** Cover the eye with eye pad or dressing. Do eye bandaging (Fig. 10.20).

**Skills:** Dressing has been discussed in the next Unit of this Block. Bandaging of eye has been discussed in Unit 1 of the next Block.

**Step 5** Record and Report

**Step 6** Transport the victim.
Steps of Procedure for control of Ear Bleeding

Step 1  Wash the hands and put on gloves if required.

**Skills:** *Important to prevent cross-contamination.*

Step 2  Make the victim or volunteer to lie in half sitting position (Fig. 10.21).

![Fig. 10.21: Half sitting position](image)

Step 3  Stand by the side of the victim so that the injured ear is towards you.

Step 4  Apply direct pressure over the area of bleeding in case of external cuts. Wrap the injured part with dressing. Cover or secure with tape. You can also tie an ear bandage.

**Skills:** The similar skills as required for control of External Bleeding are applied here as also discussed in Section 10.4 of this Unit. Dressing has been discussed in the next Unit of this Block. Bandaging of ear has been discussed in Unit 1 of the next Block (Fig. 10.22).

![Fig. 10.22 : Ear Bandaging with dressing](image)

Step 5  In case of internal bleeding, check for sign and symptoms. Apply cold pack wrapped in towel to the affected ear.

Step 6  Record and Report. Transport the victim.

Steps of Procedure for control of Bleeding from Varicose Veins

Step 1  Wash the hands and put on gloves if required.

Step 2  Make the victim/volunteer to lie on his/her back.

**Skills:** *Raising helps to direct the blood supply back to heart so that blood is used for maintaining vital organs and helps to reduce blood loss.*
Step 3 Raise the affected area as high as possible to reduce bleeding.

Step 4 Remove clothing such as stockings which may restrict blood to flow back to the heart and cause bleeding to continue.

**Skills:** Remove all constrictive clothing such as tight salwar, jeans, pant, jeggings, leggings which may decrease the free flow of blood back to heart.

Step 5 Wrap the affected area with bandage. If bandage is not available exert pressure (Fig. 10.23).

**Skills:** Use a crepe or compression bandage for this purpose.

Fig. 10.23: Compression Bandage for varicose veins.

Step 6 If the bleeding continues, put another bandage on the existing one.

Step 7 Conduct Secondary assessment. Check for Shock and manage shock.

Step 8 Record and Report.

Step 9 Transport the victim.

**Steps of Procedure for Heavy Vaginal Bleeding due to menstruation**

Step 1 Wash the hands and put on gloves if required.

Step 2 Make the victim/volunteer to sit with knee bent and support by rolled up clothing or blanket (Fig. 10.24).

**Skills:** Move the victim to a comfortable place, where you may ensure privacy.

Fig. 10.24: Sitting with knees bent
**Step 3**  Give the victim sanitary pad or clean cloth to place over the vagina.

**Step 4**  Ask her to take Paracetamol tablets to decrease/relieve pain.

**Step 5**  Conduct Secondary assessment. Check for Shock and manage shock.

**Step 6**  Record and Report.

**Step 7**  Transport the victim to medical facility.

Hence, in this section we learnt about control of bleeding in various situations. With this we come to the end of this important unit on Control of Bleeding.

### Check You Progress 1

1. True or False:
   a. Severe External Bleeding occurs due to venous bleeding.  
      True/False ……………
   b. Shock is the common condition accompanied with internal or severe bleeding.  
      True/False ……………
   c. Tourniquet can be used wherever needed.  
      True/False ……………
   d. Victim of internal bleeding should be saved from getting chilled or overheated as it effects the life of the victim.  
      True/False ……………
   e. Crepe Bandage should be applied for bandaging the bleeding varicose veins.  
      True/False ……………

### 10.7 LET US SUM UP

In this unit, we learnt how to recognize and provide prompt care for both internal and external bleeding so that we can control life threatening bleeding emergencies. In the next unit, we will discuss about wound care and dressing.

### 10.8 KEY WORDS

- **Life threatening**: Fatal, Deadly, affecting life
- **Damage**: Break, Spoil
- **Severely**: Serious, Critical to a large extent
- **Signs**: Symbol, Indication
- **Symptoms**: Features of a disease
- **Rapid**: Fastly, swiftly
- **Pressure**: Continuous exerting of force
- **Superficial**: On the surface, not deep
Oozing : Flow out
Pale : Light in colour
Clammy : Moist, sweaty
Discoloration : Change of color
Bruising : Having injury
Restlessness : Inability to rest or relax
Confusion : Uncertainty about what is happening, puzzled
Irritability : Being in a bad mood or bad nature
Collapse : Suddenly fall down or lose consciousness
Loss : Having less of something or destruction of some asset
Tenderness : Sensitivity to pain
Redness : State of being red
Bursting : Break open or apart suddenly and violently
Accompanied : Go somewhere with, assist someone
Restricts : Put a limit on, keep under control
Elevate : Lift to a higher position
Direct : Move from one place to another
Usually : Happening under normal conditions or generally
Application : Use
Secure : Fixed so as not to become loose, or be lost.
Interfere : Obstruct or restrain or prevent from doing something
Clotting : Form or cause to form clots
Dangerous : Able or likely to cause harm or injury
Swelling : An abnormal enlargement of a part of the body
Constrict : Make narrow
Psychological : Emotional, intellectual
Support : Give assistance
Reassurance : The action of removing someone’s doubts or fears
Chilled : Cold
Overheated : Having temperature higher than the human body
Constrictive : Which constricts or becomes smaller or narrower
Exert : Apply pressure

10.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1
a. False  b. True  c. False  d. True  e. True
10.10 ACTIVITIES

Activity 1

Enact a case scenario in which one of your friend has injured his hand with bleeding. Practice the procedure for Control of Bleeding in this situation. Record it in your Log-Book.

(Supervised Activity)

Activity 2

Practice control of Bleeding for your friend who has nose bleeding. Enact the scenario and record in your Log-Book.

(Self Activity)

10.11 REFERENCES