

Lesson 3

Controlling Bleeding



Key Words

arteries
dressing
elevated
hemorrhage
pressure bandage
pressure point
veins

What You Will Learn to Do

- Determine first aid procedures for a bleeding victim

Linked Core Abilities

- Do your share as a good citizen in your school, community, country, and the world

Skills and Knowledge You Will Gain Along the Way

- Identify the three types of bleeding
- Identify the best way to control most bleeding cases
- Distinguish among direct pressure, pressure points, and a tourniquet to control bleeding
- Describe how to clean wounds
- Define the key words contained in this lesson

Introduction

In an accident situation, you may encounter injured persons bleeding from wounds such as scrapes, cuts, or punctures as well as tears or gashes in the skin. The deeper a wound is, the more serious it becomes. Minor wounds to the outer layer of skin do not bleed heavily but still require cleaning to avoid infection. Deeper wounds in which **arteries** and **veins** are cut can be life threatening. These kinds of wounds may involve great loss of blood, and blood may often pulse or spurt out of the wound. Severe bleeding, or **hemorrhage**, can result in shock or death if not treated promptly. It is essential to stop the loss of blood in these cases. If a victim loses too much blood, even CPR will not keep the person alive because there will not be enough blood to deliver oxygen from the lungs to the body.

Types of Bleeding

There are three types of bleeding you may encounter in an emergency situation:

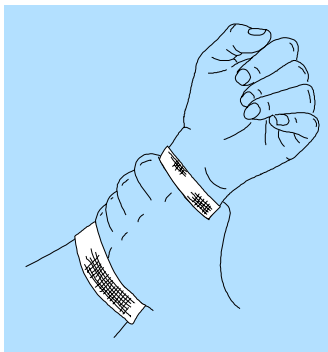
- **Arterial bleeding.** Blood loss from an artery. Characterized by bright red blood that spurts with each heartbeat, arterial blood loss is severe and hard to control. Give it first priority for treatment.
- **Venous bleeding.** Blood loss from a vein. Venous bleeding is characterized by a steady flow of dark blood.
- **Capillary bleeding.** Blood loss from the capillaries (the smallest blood vessels); usually characterized by a slow flow of blood.

First aid treatment in all of these cases includes stopping the flow of blood and preventing infection.

Direct Pressure

In most cases, applying continuous, direct pressure to a wound is the best way to control bleeding. To apply direct pressure, place a **dressing** over the wound and apply pressure to the dressing, as shown in Figure 2.3.1. A dressing should be

- **As sterile as possible (If a sterile dressing is not available, use a clean cloth— a washcloth, towel, or handkerchief)**



Key Note Terms

arteries – blood vessels that carry blood away from the heart to all parts of the body

veins – blood vessels that carry blood from all parts of the body to the heart

hemorrhage – Heavy, uncontrollable bleeding

Key Note Term

dressing – ointment and bandages applied to a wound

Figure 2.3.1: Apply direct pressure to the bandage to stop bleeding.

Courtesy of CACI and the U.S. Army.

- **Larger than the wound**
- **Thick, soft, and compressible so pressure is evenly distributed over the wound**
- **Lint free**

If a clean cloth or gauze is not available, use clothing, your bare hands, or your fingers—whatever is the cleanest. Continue applying pressure and the bleeding should begin to slow or stop within 30 minutes.

Stopping Infection

Even the slightest wound requires immediate cleansing. The best way to clean wounds is to wash them with soap and water. At home, use water from the faucet. On a hike, use water from a canteen or the clear running water of a stream. If available, use an antiseptic cleanser instead of soap. Wait until the skin around the wound dries and then put on a bandage. If available, apply an antiseptic cream to the wound before bandaging it.

For a minor wound, cleaning and bandaging it is probably all that is required. Deep wounds, wounds made by animal or human bites, and wounds contaminated by dirt, rust, or other items require medical treatment. Clean and bandage these wounds, and get medical assistance as soon as possible. If a wound contains glass or other objects stuck into the flesh, do not remove them unless they wash out of the wound easily.

Controlling Bleeding to Extremities

In most cases, direct pressure is the best way to stop bleeding of wounds to the extremities (arms and legs). As you apply direct pressure, keep the injured limb **elevated** above the heart to slow the flow of blood out of the body. After initially applying direct pressure, you may want to apply a **pressure bandage** by wrapping a bandage snugly around the limb, using overlapping turns with a roll of gauze. Do not tie the pressure bandage so tightly that it restricts blood flow to the lower part of the limb. If fingertips or toes appear bluish or if there is no pulse below the dressing, loosen the material used to secure the dressing immediately. After you apply a pressure bandage, only qualified medical personnel should remove it.

Pressure Points

In the case of severe bleeding that does not slow or stop using direct pressure, finger pressure may be applied to the **pressure point** on the injured limb between the wound and the heart. Pressure points, shown in Figure 2.3.2, are locations on the body where arteries are close to the surface. By applying pressure at these points, you slow or stop the flow of blood through the artery.

Key Note Terms

elevated – raised up

pressure bandage – a snug bandage used to control bleeding

Key Note Term

pressure point – a point on the body where a major artery lies near the skin surface and passes over a bone

As with mouth-to-mouth resuscitation and CPR, it is better to have first aid training on pressure points before actually using this technique to stop bleeding. If done incorrectly, you may damage healthy tissue fed by the artery you are constricting.

Tourniquet

If heavy blood loss continues, as from amputation, it may be necessary to use a tourniquet.

Caution

Because a tourniquet is a constricting band that stops the flow of blood below it, it can kill the limb to which it is applied; therefore, only use a tourniquet if no other method works to stop the bleeding and you believe the injured person's life is in danger.

To apply a tourniquet, follow these steps:

1. Fold a cloth until it is approximately two inches wide and long enough to go around the injured limb (see Figure 2.3.3).
2. Tie the material in a loop and position it two to four inches above the wound, but not over a joint.
3. Pass a rigid object, such as a stick, under the tourniquet loop and twist it until the bleeding stops (see Figure 2.3.4).
4. Tie off the end of the stick with another piece of cloth or string to prevent it from unwinding (see Figure 2.3.5).
5. Mark the victim's forehead with a "T" to alert medical personnel that you have applied a tourniquet.

If it is necessary to cover the victim with a blanket, do not cover the tourniquet to make it easier for medical personnel to spot. After you apply a tourniquet, do not loosen or remove it. As with a pressure dressing, only qualified medical personnel should remove a tourniquet.

Note

Remember, use a tourniquet only as a last resort when all other attempts to stop the bleeding fail.

Controlling Bleeding to the Head and Torso

There are different way to control head and torso bleeding. This section details how to use the methods.

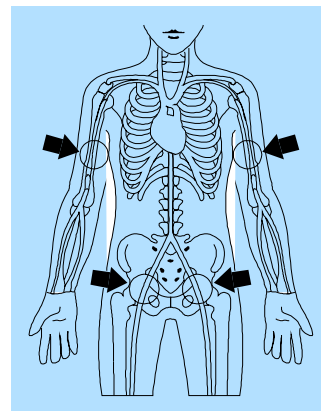


Figure 2.3.2: Use pressure points on the body to help slow or stop bleeding.

Courtesy of CACI and the U.S. Army.

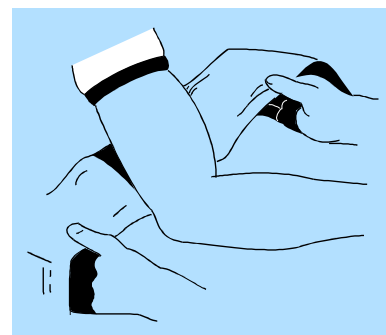


Figure 2.3.3: Fold a cloth so it is long enough to go around the injured limb.

Courtesy of CACI and the U.S. Army.

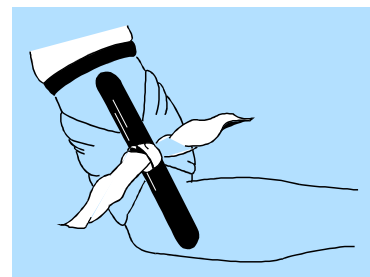


Figure 2.3.4: Use a stick or other rigid object to tie off the tourniquet.

Courtesy of CACI and the U.S. Army.

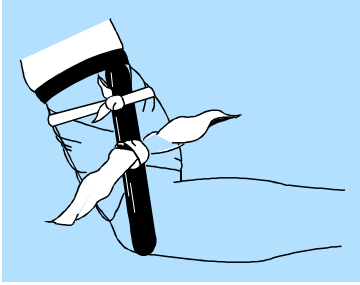


Figure 2.3.5: Secure the end of the stick to keep the tourniquet from unwinding.

courtesy of CACI and the U.S. Army.

Scalp Injuries

For wounds to the scalp, use a pressure dressing. If brain tissue is exposed, tie the dressing loosely over the wound. Do not press the brain tissue back into the open wound.

Facial Injuries

Control bleeding from facial wounds by using a pressure bandage. Position the victim to prevent him or her from breathing blood. Victims who have sustained a severe blow to the head should be kept under close observation as they may have brain damage and could require rescue breathing.

Chest Injuries

A chest injury may result in an open chest wound, which could lead to air leaking from a lung and the collapse of a lung. If conscious, have the victim breathe out and apply some material such as plastic wrap or foil to the wound. Bind a pressure bandage tightly to the wound to prevent leakage of air and slow down blood loss. Have the victim sit up, if possible, or lay that person on the injured side.

Abdominal Injuries

When an open abdominal wound has exposed visceral (internal) organs, cover the abdomen loosely with dressings. Do not force the organs back into the body cavity and do not give victims with abdominal wounds any food or water.

Conclusion

Severe bleeding from wounds in which arteries or veins are cut can be life-threatening to an injured person; therefore, controlling the loss of blood is second in importance only to restoring breathing and circulation. In most cases, applying direct pressure to a wound is the best way to control bleeding. Cleansing a wound to stop infection is also extremely important. If you know these two facts, and the other details on controlling bleeding to the extremities, head, and torso, you can successfully accomplish the second life-saving step in an emergency situation.

In the next lesson, you will learn how to treat shock. You will also learn how to immobilize fractures.

Lesson Review

1. List and explain the three types of bleeding.
2. How does direct pressure help stop bleeding?
3. Why is it important to use bandages that are as clean as possible?
4. Define the term *hemorrhage*.