



Disaster First Aid Part 2: Controlling Bleeding

MCC Member Protection

When able the MCC member should first ensure they are wearing the appropriate personal **protective equipment**. This may include a helmet, work gloves over non-latex gloves, boots, eye protection, and a face mask. Assess the scene for your own safety and needs for additional help.

Approaching a Patient

There are several steps to take when **approaching a patient**.

- IF the patient is conscious, be sure they can see you.
- Identify yourself by giving your name and affiliated organization
- Request permission to treat an individual. If they are unconscious, consent is “implied” as yes.
- Respect and be aware of cultural differences
- The individual still has the right of confidentiality
- Request to pray with or for them

Controlling Bleeding

An adult has about 5 liters of blood. Loss of blood can lead to shock. If half of the blood supply is lost, death is unavoidable. This makes it important to control bleeding as soon as possible. The table below shows the four stages of severe bleeding. This is a good guideline to know.

Stage	Blood Loss	Heart Rate	Blood Pressure	Breath Rate	Patient
I	Less than 15%	Normal (<100 bpm)	Normal	14-20	Patient appears normal
II	15%-40%	Fast (>100 bpm)	Slightly Low	20-30	Patient may feel anxious
III	30%-40%	Very Fast (>120 bpm)	Low	30-40	Patient feels confused
IV	Greater than 40%	Critical (>140 bpm)	Critical	>35	Patient feels lethargic

There are three types of bleeding, characterized by the speed of the blood flow.

- Arterial: this will spurt small or large as the artery transports blood under high pressure

- Venous: blood will flow steadily from a low pressure system
- Capillary: small vessels that ooze but may be persistent

A. **Control Bleeding:** Direct Pressure

The first way to control excessive bleeding is through applying direct pressure at the point of bleeding.

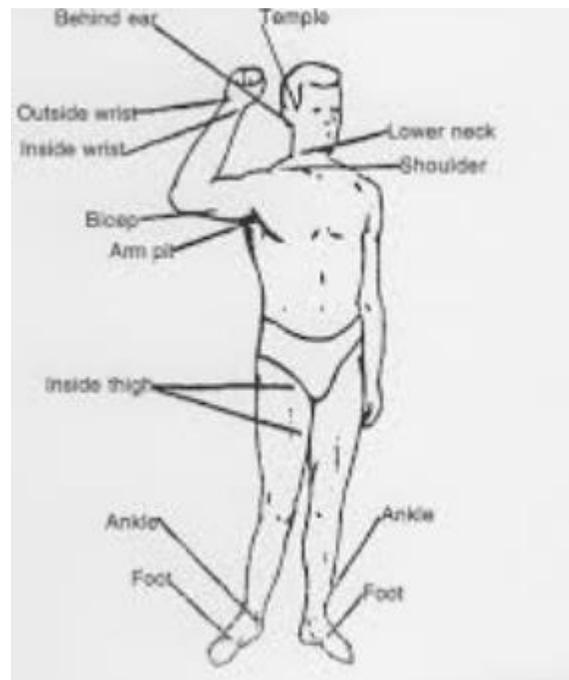
Method 1: Plug the hole

- Find the source
- Apply firm, steady pressure directly on the source. Using a gauze bandage will help with controlling the wound. Push hard even if painful to the injured until it slows or better yet stops
- Keep pressure applied until other help arrives to assist.

Notes: gloves are mainly to protect you against blood. Do not use the same pair on more than one person. If a dressing is used and it becomes soaked, replace it. Putting more layers on top reduces the direct effect of the pressure. Note, arteries have nerves in them, so this will be painful, but keep it up.

Method 2: Pressure Points

The next way to apply pressure is to go to a pressure point of an artery. Usually a pulse can be felt here, allowing direct reduction of blood flow in the artery past the point where pressure can be applied.



B. **Control bleeding:** Tourniquets

If direct pressure doesn't work or more trained help is not readily available, a tourniquet can be a viable option to save a person from bleeding to death. A tourniquet is a tight bandage, which when placed around a limb and tightened, cuts off the blood supply to the part of the limb beyond it. It is safe when applied appropriately. The odds favor saving a life over the loss of the limb. Commercial tourniquets are widely available. It is possible to make one yourself using something that is broad, flexible, strong and able to be twisted, such as a webbed belt or luggage strap. Improvised tourniquets often fail and need more monitoring for effectiveness. But, even slowing bleeding may be life-saving.

How to use a tourniquet:

- Place the tourniquet as high as possible on injured limb (it can be over clothing)
- Pull the strap through a buckle
- Twist the rod tightly until bleeding stops/slowly significantly
- Secure the rod
- If bleeding continues, place a second tourniquet
- Leave in place



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There is a tourniquet kit called “STOP The Bleed put out by the Committee on Trauma. It has a tourniquet and an agent that coagulates the blood, even if someone is cold or wet. Having one available can be lifesaving. Go to STOPTHEBLEED.org for more information.

Recognizing Shock

The body tries to compensate for blood loss which can mask the symptoms of shock. This makes shock often difficult to diagnose. An individual can be fully coherent and in no pain, but be in a severe shock state.

The signs of shock to look for:

- Rapid and shallow breathing (20 or more breaths per minute)
- Capillary refill of greater than two seconds (nail beds or palms of hands can be used)
- Failure to follow simple commands, such as “squeeze my hand” (reaching out with both hands and squeeze the patient’s hands, they will squeeze back if they can)

It is important to maintain the patient’s body temperature to minimize or treat shock. People with serious injuries are more susceptible to abnormally low body temperature (hypothermia). This then can enhance bleeding tendencies. It is important to maintain a normal body temperature in patients.

To keep someone warm:

- Remove wet clothing
- Place something between the injured person and the ground
- Wrap the injured person with dry layers
- Shield the injured from wind, rain, snow, hail

More information will be given in other training classes regarding shock, hypothermia, mental status and breathing.

Clinical Exercises

1. Pressure dressing and tourniquets

- Break into pairs. One is the victim, the other a rescuer
- Role play an injury on the right forearm, just below the elbow, bleeding severely
- Approach the victim and identify yourself
- Apply a pressure bandage
- Apply a tourniquet
- Switch roles
- Role play an injury to the left ankle from a foot partial amputation

2. Keeping a patient warm

- Mylar or fabric blankets can be used to cover a patient while maintaining visibility of wound or tourniquet as possible.
- Coats or clothing, other fabrics as available
- Cardboard, paper between the ground and the patient as a barrier

3. Identify pressure points to utilize for extremity and head injuries

- Wrist, ankle
- arm at shoulder
- groin
- knee, elbow
- temple and behind ear on head

Disaster First Aid Part 2: Controlling Bleeding

For course certification, the form must be filled out.

Member Name (Print) _____ Instructor Name (Print) _____

Member Position Number _____ Instructor Position Number _____

Member FEMA SID _____ Instructor FEMA SID _____

Date of Instruction _____

 List the recommended MCC Member Protection equipment.

 Know the steps for how to approach a patient.

 Define the two method pathways for Controlling Bleeding.

_____ Direct Pressure _____ Tourniquet

 Be able to recognize shock and list prevention methods.

_____ Complete the Clinical Exercises.

With a complete sheet of initials, the instructor's signature signifies certification of completion for the Disaster First Aid Part 2: Controlling Bleeding course.

Instructor Signature _____