



Essentials of Bleeding Control for the Injured

Presented by

The Howard County Department
of Fire and Rescue Services

Adapted from

The National Association of Emergency Medical Technicians



Bleeding Control Training

WARNING!

Some of the images shown during this presentation may be disturbing to some people



The Good Samaritan Law

Maryland Courts and Judicial Proceedings Code

§ 5-603

“An individual who is not [licensed in this state to provide medical care] is not civilly liable for any act or omission in providing assistance or medical aid to a victim at the scene of an emergency, if:

- (1) The assistance or aid is provided in a reasonably prudent manner;
- (2) The assistance or aid is provided without fee or other compensation; and
- (3) The individual relinquishes care of the victim when someone who is licensed or certified by this State to provide medical care or services becomes available to take responsibility.”



Objectives

- **Explain** how to recognize life-threatening bleeding and to stop it
- **Demonstrate** how to apply direct pressure to a bleeding wound and how to apply a tourniquet to the arm or leg
- **Demonstrate** how to “pack a wound” and apply pressure to control bleeding
- **Explain** the importance of immediate transport to a hospital due to chest/abdomen injuries



Why Do I Need This Training?

**Work-related
injuries**

**Mass
Shootings**

**Home
injuries**

**Motor vehicle
crashes**

Bombings



Primary Principles of Trauma Care Response

- Ensure your own safety
- The **ABCs** of Bleeding
 - A** – **Alert** – call 9-1-1
 - B** – **Bleeding** – find the bleeding injury
 - C** – **Compress** – apply pressure to **Stop The Bleeding**:
 1. **Apply pressure** to the wound with a clean cloth by pushing directly on it with both hands; if bleeding continues...
 2. **Pack** (fill) the wound with gauze or a clean cloth and then applying pressure with both hands; if bleeding continues...
 3. **Use a tourniquet**





Primary Principles: Safety

- Before helping anyone, ensure your own safety!
 - If you become injured, you will not be able to help the victim
- Initiate care if the scene is safe for you to do so
 - If, at any time, your safety is threatened, remove yourself from danger and find a safe location
- Protect yourself from blood-borne infections by wearing gloves, if available
 - If not available, what would you use?
Clean plastic bag, rain jacket, or any type of barrier



Primary Principles: ABCs of Bleeding

- **A – Alert**

- Help will not come unless you call!
 - Call 9-1-1 yourself or tell someone to call 9-1-1
 - If possible, note the location, number of injured, or any other threats
- This will help quickly get emergency responders to the scene
 - Depending on the circumstances, it may take extra time to get to the patient



Primary Principles: ABCs of Bleeding

- **B – Bleeding**

- Find where on the victim is bleeding from
- Open or remove the clothing surrounding the wound so you can clearly see it
 - You may discover injuries previously hidden
- Look for and identify “life-threatening” bleeding



Primary Principles: ABCs of Bleeding

- **B – Bleeding** (continued)

What is “life-threatening” bleeding?

- Blood that is spurting out of the wound
- Blood that wont stop coming out of the wound
- Blood that is pooling on the ground
- Clothing that is soaked with blood
- Bandages that are soaked with blood
- Loss of all or part of an arm or leg
- Bleeding in a victim who is now confused or unconscious



Primary Principles: ABCs of Bleeding

- **B – Bleeding** (continued)

What is “life-threatening” bleeding?



**Blood spurting out of a wound
(wound of artery)**



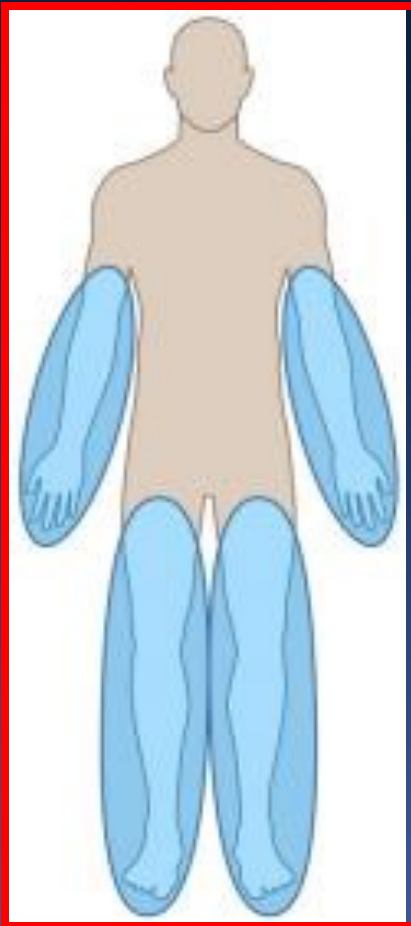
Courtesy of Norman McSwain, MD, FACS, NREMT-P.
Blood soaking the sheet or clothing



Wounds that Lead to Bleeding Deaths (1 of 3)

Arms and Legs

- Most frequent cause of **preventable** death from injury
- Bleeding from these wounds can be controlled by **direct pressure, wound packing** or, if needed, a **tourniquet**

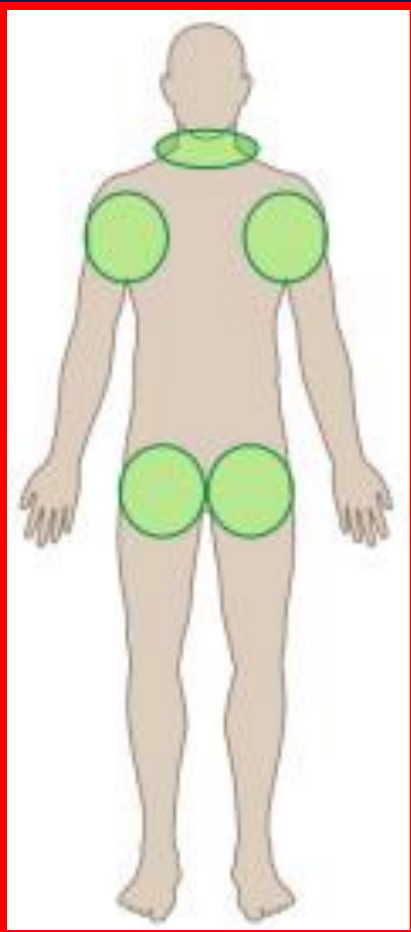




Wounds that Lead to Bleeding Deaths (2 of 3)

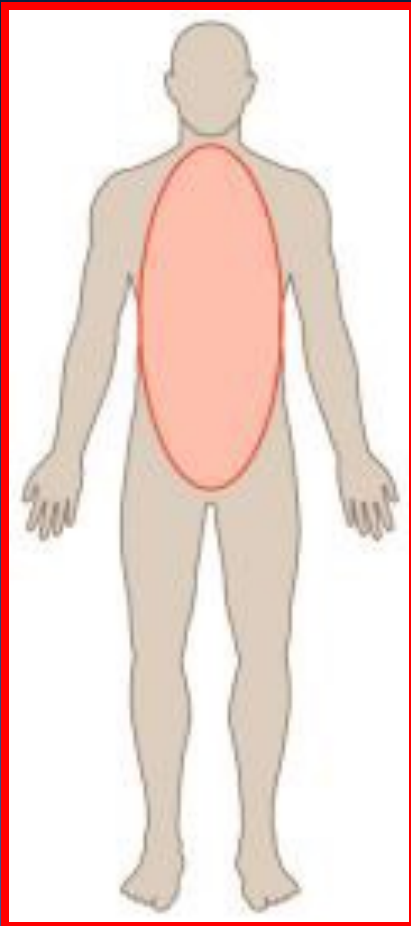
Torso Junctional wounds:

- Neck, shoulder, armpit, and groin
- Bleeding can be controlled by **direct pressure** and **wound packing**
- Tourniquets should not be used for these wounds





Wounds that Lead to Bleeding Deaths (3 of 3)

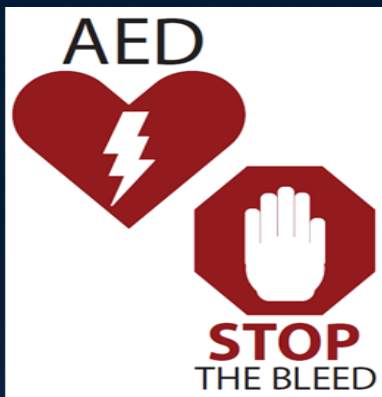


- Injuries to the chest and abdomen (front and back)

-Usually cause internal bleeding

- This bleeding **CANNOT** be stopped outside the hospital
- These victims need rapid transport to a trauma center

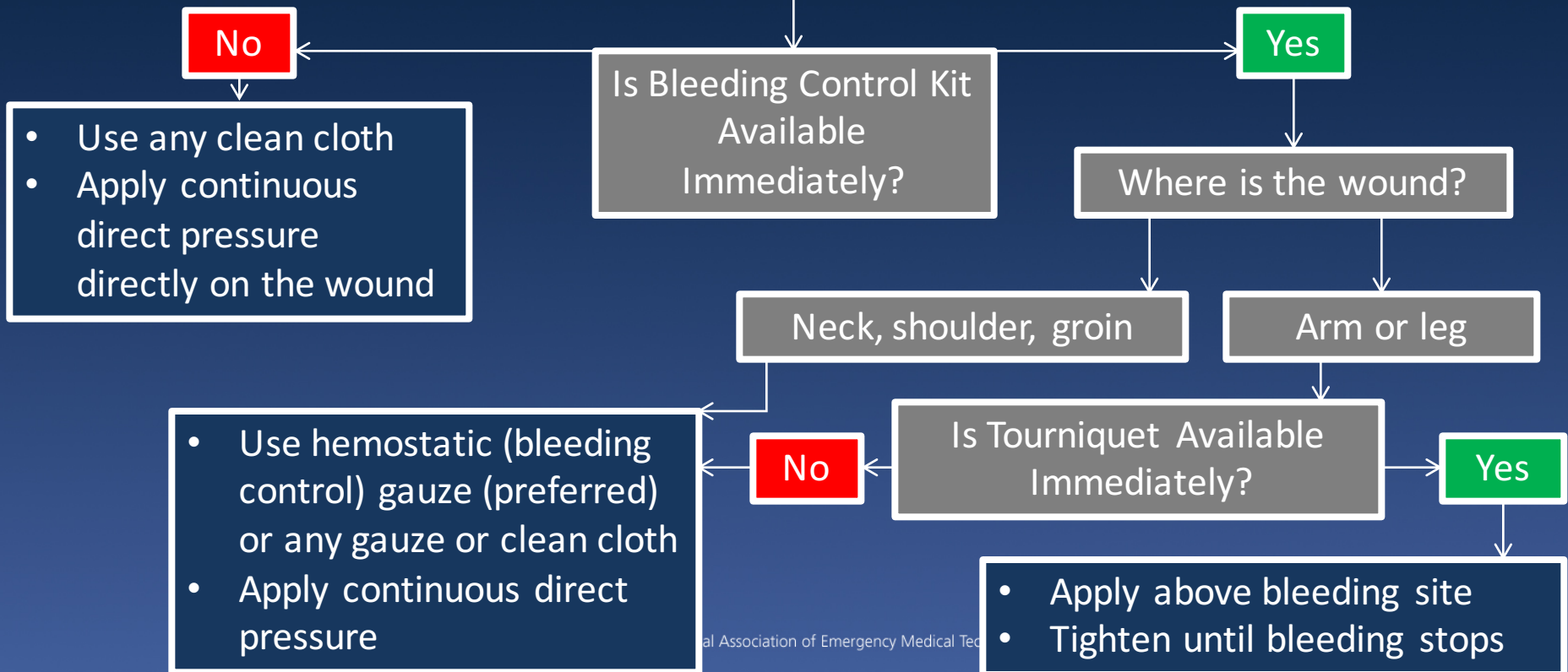




Primary Principles: ABCs of Bleeding

- **C – Compression:** Stop the bleeding

LIFE THREATENING BLEEDING





Direct Pressure (1 of 3)

- Take any clean cloth (i.e. shirt) and cover the wound
- If the wound is large and deep, try to “stuff” the cloth down into the wound, toward the direction of bleeding



Courtesy Adam Wehrle, NREMT-P



Courtesy Adam Wehrle, NREMT-P

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Courtesy Adam Wehrle, NREMT-P



Direct Pressure (2 of 3)

- Maintain continuous pressure with both hands directly on top of the bleeding wound
- Push down as hard as you can
- Hold pressure until relieved by medical responders



Courtesy Adam Wehrle, NREMT-P



Direct Pressure (3 of 3)

- For direct pressure to be effective, it must be:
 - Applied with two hands if at all possible
 - Strong and continuous
 - Applied with the victim on a firm surface to provide support
 - Applied without any interruption to check for on-going bleeding, until relieved by medical responders or, if needed, a tourniquet can be applied



Wound Packing (1 of 4)

- Open clothing around the wound
- If possible, remove excess pooled blood from the wound while preserving any clots already formed in the wound
- Locate the source of the most active bleeding



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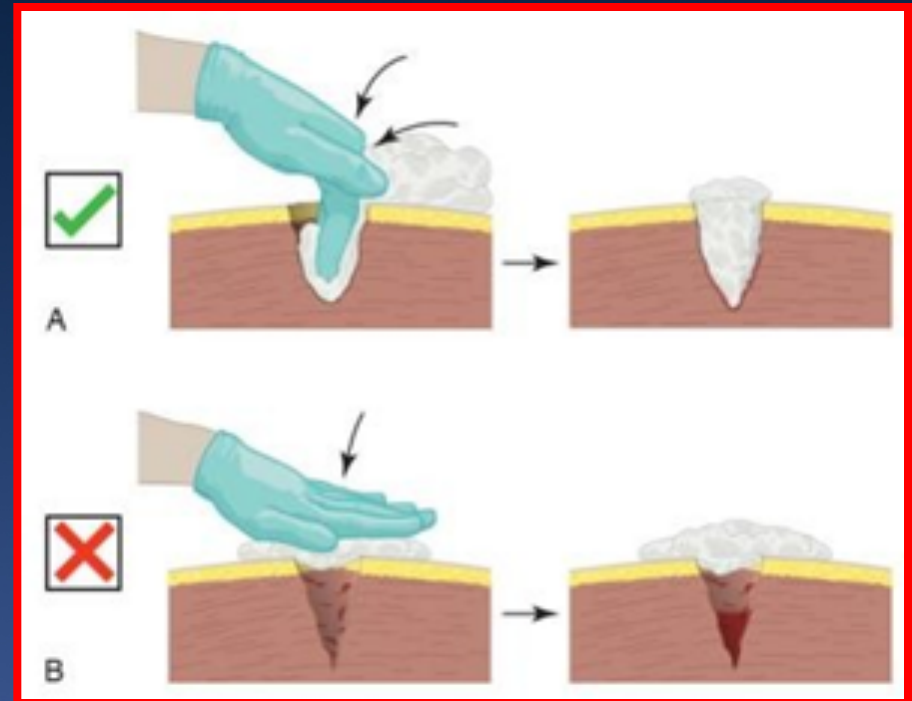


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Wound Packing (2 of 4)

- Pack
 - Hemostatic dressing (preferred if available), OR
 - gauze roll, OR
 - clean cloth into wound and directly onto the source of bleeding





Wound Packing (3 of 4)

- Quickly apply and hold pressure directly on the wound for 3 minutes if using a hemostatic dressing
- Reassess to ensure bleeding is controlled
 - If initial packing fails to stop bleeding, pack a second gauze on top of the first and reapply pressure
- If using plain gauze or cloth, hold pressure until relieved by medical responders



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Wound Packing (4 of 4)

- If bleeding has stopped, leave packing in place
- Wrap to keep the packing in the wound
- The wound may be wrapped with any type of elastic bandage or roll of gauze



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The Tourniquet

- A tourniquet is a device that stops the flow of blood
- If applied correctly, the tourniquet stops all blood flow into the extremity and out of the wound
- Limiting blood loss may prevent the patient from going into shock



Courtesy Norman McSwain, MD FACS, NREMT-P.



Combat Application Tourniquet (C.A.T.)

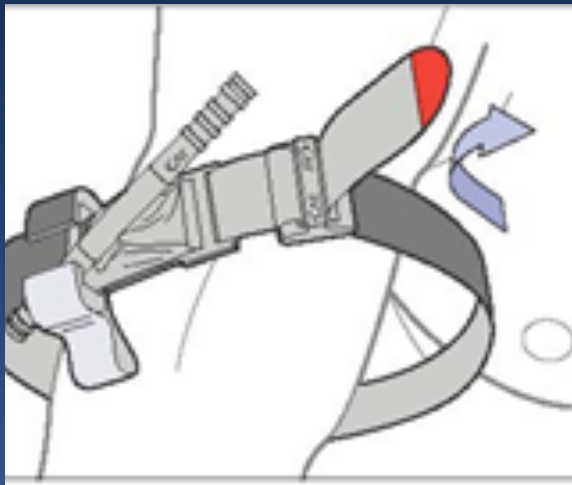
The C.A.T. is the military's preferred tourniquet because it is easy to use and can be rapidly applied.



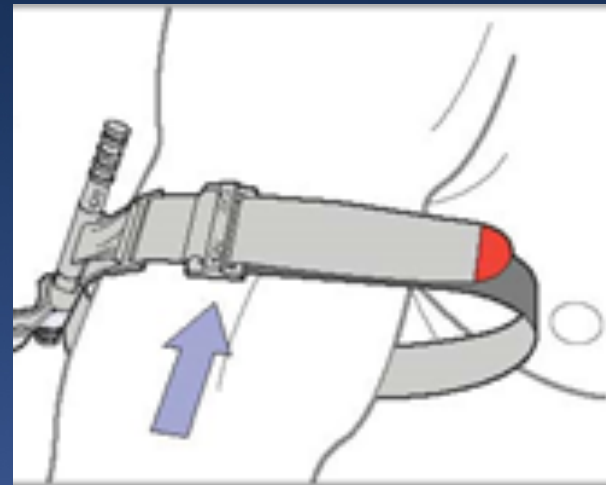


Combat Application Tourniquet (1 of 5)

Step 1. Apply the C.A.T. to the wounded extremity (arm or leg).



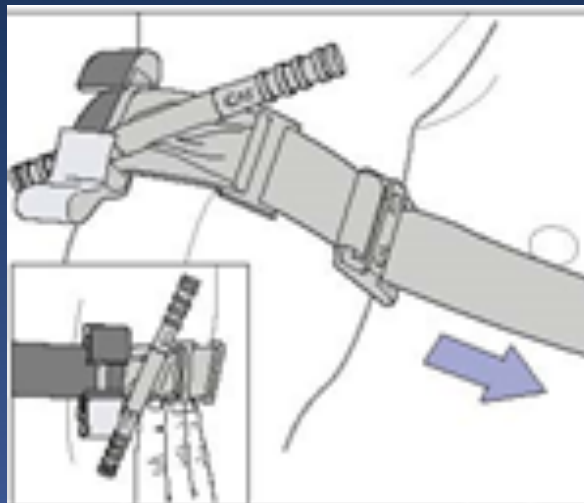
OR





Combat Application Tourniquet (2 of 5)

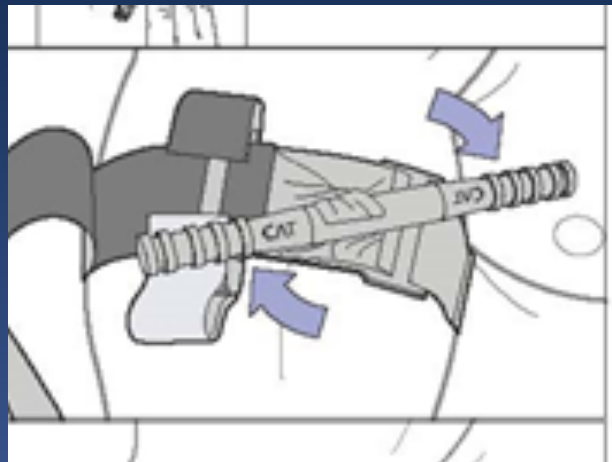
Step 2. Pull the self-adhering band as tight as possible, and securely fasten it back on itself all the way around the limb but not over rod clips.





Combat Application Tourniquet (3 of 5)

Step 3. Twist the rod until the bleeding has stopped. **This will hurt!**





Combat Application Tourniquet (4 of 5)

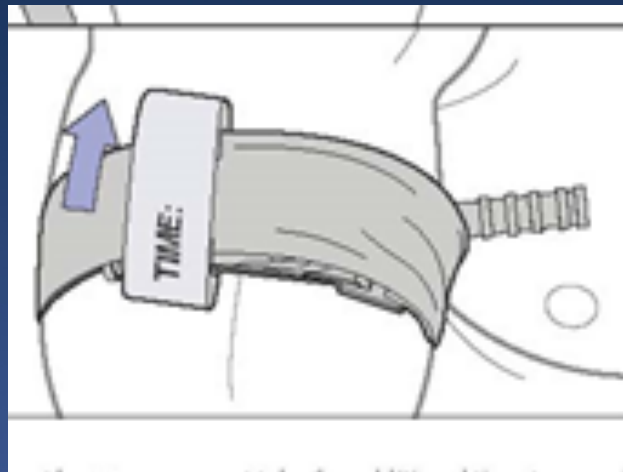
Step 4. Secure the rod inside the clip to lock it in place. If bleeding is not controlled, consider additional tightening or applying a second tourniquet above the first.





Combat Application Tourniquet (5 of 5)

Step 5. Route the band between the clips and over the rod. Secure rod and band with the time strap. Record time of application.





Blood Exposure

- After arrival of medical responders, if you have any blood on you:
 - wash thoroughly with soap and water to remove all blood, AND
 - notify medical responders of possible exposure



Other Considerations



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- **Airway Support**

- Roll the victim on their side to keep saliva/blood from pooling in the mouth

- **Keep the victim warm**

- Cover them with a blanket/coat, if possible
- blood loss = heat loss = inability to clot



Practice



Summary

- Ensure your own safety.
- The **ABCs** of Bleeding
 - A – Alert** – call 9-1-1
 - B – Bleeding** – find the bleeding injury
 - C – Compress** – apply pressure to stop the bleeding by:
 1. Covering the wound with a clean cloth and applying pressure by pushing directly on it with both hands, OR
 2. Packing (filling) the wound with gauze or a clean cloth and then applying pressure with both hands, OR
 3. Using a tourniquet



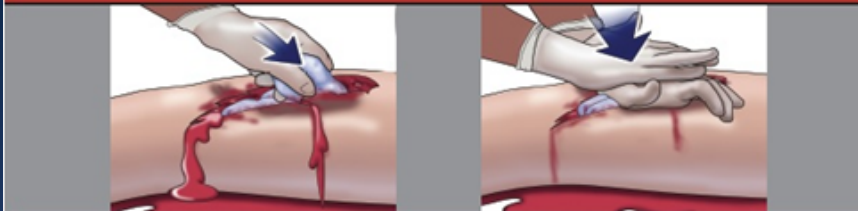
STOP
THE BLEEDSM
SAVE A LIFE



1 APPLY PRIMARY PRESSURE WITH HANDS



2 APPLY HEMOSTATIC DRESSING



3 APPLY TOURNIQUET



WRAP

WIND

SECURE

TIME

CALL 911

www.hcdfers.org/stopthebleed 410-313-6000





AED



STOP THE BLEED



STOP THE BLEEDING!

The only thing more tragic than a death...
is a death that could have been prevented

Questions?



Where to Buy Kits?

- Individual Bleeding Control Kit (Vacuum Sealed Pouch) – Cost: \$64.98. Vendor: North American Rescue, LLC. Vendor Point of Contact: Brent Bronson <bbronson@narescue.com>.
- Standard (Multi-Patient) Bleeding Control Kit (Nylon Pouch) – Cost: \$375. Vendor: Z-Medica. Vendor Point of Contact: Robert Brown <rbrown@z-medica.com>.