



SEA PAC ~2019

**SAVE A LIFE
STOP THE BLEED® Course
American College of Surgeons**

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Version 2



BLEEDINGCONTROL.ORG
STOPTHEBLEED.ORG



THE
COMMITTEE
ON **TRAUMA**



100+ years

AMERICAN COLLEGE OF SURGEONS

*Inspiring Quality.
Highest Standards. Better Outcomes*

This educational program is presented by:
James Wilmerding, W1EMT
Owner/Director - Community Paramedic
The Northeast Harbor Training Center, LLC
Mt. Desert Island, Maine



**The Hartford
Consensus
Group**



**The American
College of Surgeons
Committee on
Trauma**



**The Committee
on Tactical
Combat
Casualty Care**



**The National
Association of
Emergency Medical
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Why Do I Need This Training?

The **#1** cause of preventable death after injury is **bleeding**.

Where Can I Use This Training?



Goals

1. Identify

Recognize
life-threatening
bleeding

2. Stop the Bleed

Take steps to
STOP THE BLEEDING

- ✓ Pressure
- ✓ Packing
- ✓ Tourniquets

Personal Safety

YOUR safety is **YOUR** first priority

- If you are injured, you cannot help others
- Help others only when it's **safe** to do so
- If the situation changes or becomes **unsafe**:
 - ✓ Stop
 - ✓ Move to safety
 - ✓ If you can, take the victim with you

Personal Safety

YOUR safety is **YOUR** first priority

- Wear gloves if you can
- If you get **blood** on you, be sure to clean any part of your body that the blood has touched
- Tell a health care provider that you got **blood** on you, and follow his or her direction

ABCs of Bleeding Control

A Alert 911

B Bleeding

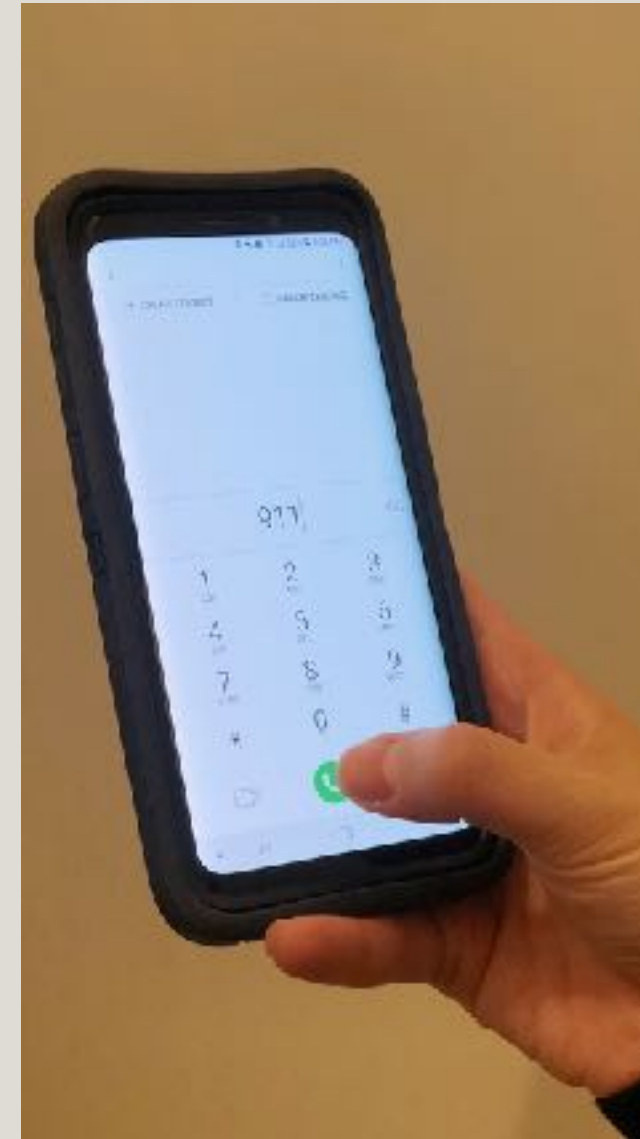
C Compress

ABCs of Bleeding Control

A Alert 911

B Bleeding

C Compress



ABCs of Bleeding Control

A Alert 911

- Call 911
- Know your location
- Describe what happened
- What are you doing - treatment
- Continue to evaluate the patient
- Follow instructions provided by 911 operator

DO NOT HANG UP!!

Primary Principles:

ABCs of Bleeding



A • Alert

- ✓ Get help IMMEDIATELY
- ✓ Alerting 9-1-1 will notify and get emergency medical responders and, depending on the situation, police officers to respond to the scene
NOTE - An adult has approx. 4.5 - 5.5 liters of blood in the body (9-12 pints)
- Losing > 40% volume (2 +/- liters) can be life threatening (3-4 pints)
- ✓ UNSTOPPED YOU CAN “BLEED OUT” IN A **MATTER OF MINUTES!!**
- ✓ ALL bleeding does stop eventually!!!

WARNING! Some of the **images** shown during this presentation are graphic and may be disturbing to some people.

ABCs of Bleeding Control

A Alert 911

B Bleeding

C Compress



Primary Principles:
ABCs of Bleeding



B • Bleeding (continued)

What is “life-threatening” bleeding?



Blood spurting out of a wound



Blood soaking the sheet or clothing

Photo courtesy of Norman McSwain, MD, FACS, NREMT-P.

Primary Principles:

ABCs of Bleeding



B • Bleeding

Find where the victim is bleeding from

- Open or remove the clothing so you can see the wound

Look for and identify “life-threatening” bleeding

- Blood that is spurting out of the wound
- Blood that won't stop coming out of the wound
- Blood that is pooling on the ground
- Clothing/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

ABCs of Bleeding Control

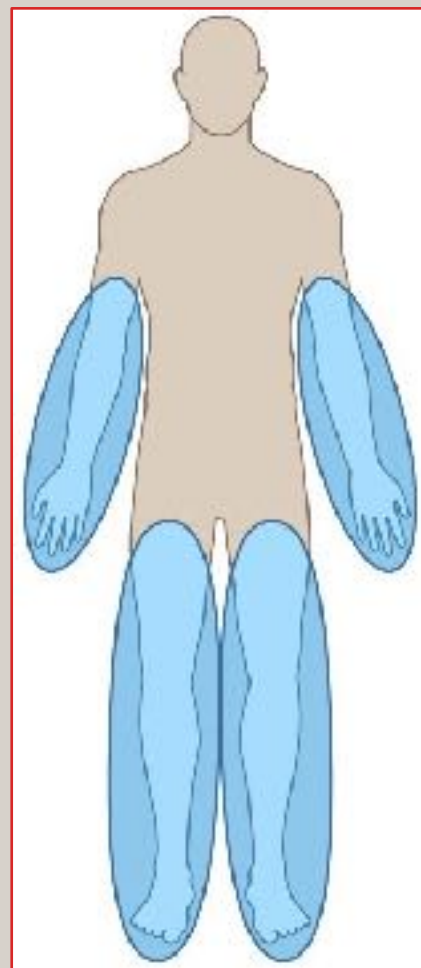
B Bleeding

- There may be multiple places where the victim is **bleeding**
- Clothing may also hide life-threatening **bleeding**



B • Bleeding (continued)

Wounds That Can Lead to Death from Bleeding (1 of 3)



Arm and Leg Wounds

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

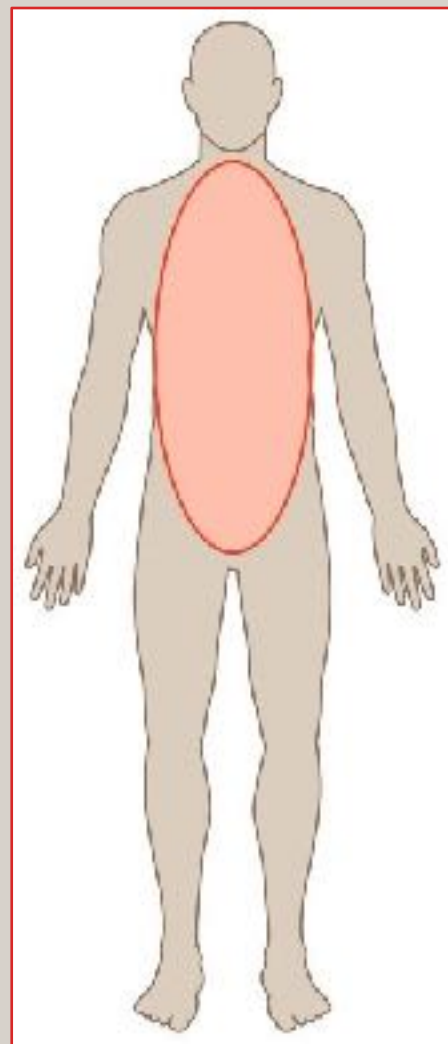


Photo courtesy of Peter T. Pons, MD, FACEP.



B • Bleeding (continued)

Wounds That Can Lead to Death from Bleeding (3 of 3)



Chest and Abdominal Injuries

- Front, back, or side
- Usually cause internal bleeding
- This bleeding **CANNOT** be stopped outside the hospital
- These victims need rapid transport to a trauma center
- Identify these patients to EMS providers when they arrive



Multiple gunshot wounds

Photo courtesy of Peter T. Pons, MD, FACEP.

ABCs of Bleeding Control

A Alert 911

B Bleeding

C Compress - Pressure





C • Compression: Stop the Bleeding (continued)

Direct Pressure (1 of 3)

- Use your hand or fingers. Use two hands, if at all possible
- OR Kneel down on the wound with your whole body weight!
- Effective most of the time for external bleeding. It can stop even major arterial bleeding
- Bleeding control requires very firm, continuous pressure until relieved by medical responders - **DO NOT STOP.**
- To be effective, apply pressure with the victim on a firm surface to provide support
- **NO PEEKING!!** - Don't release pressure to check the wound

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Direct Pressure (2 of 3)

- Use any clean cloth (for example, a shirt) to cover the wound
- If the wound is large and deep, try to “stuff” the cloth down into the wound



Photos courtesy of Adam Wehrle, NREMT-P.

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Direct Pressure (3 of 3)

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

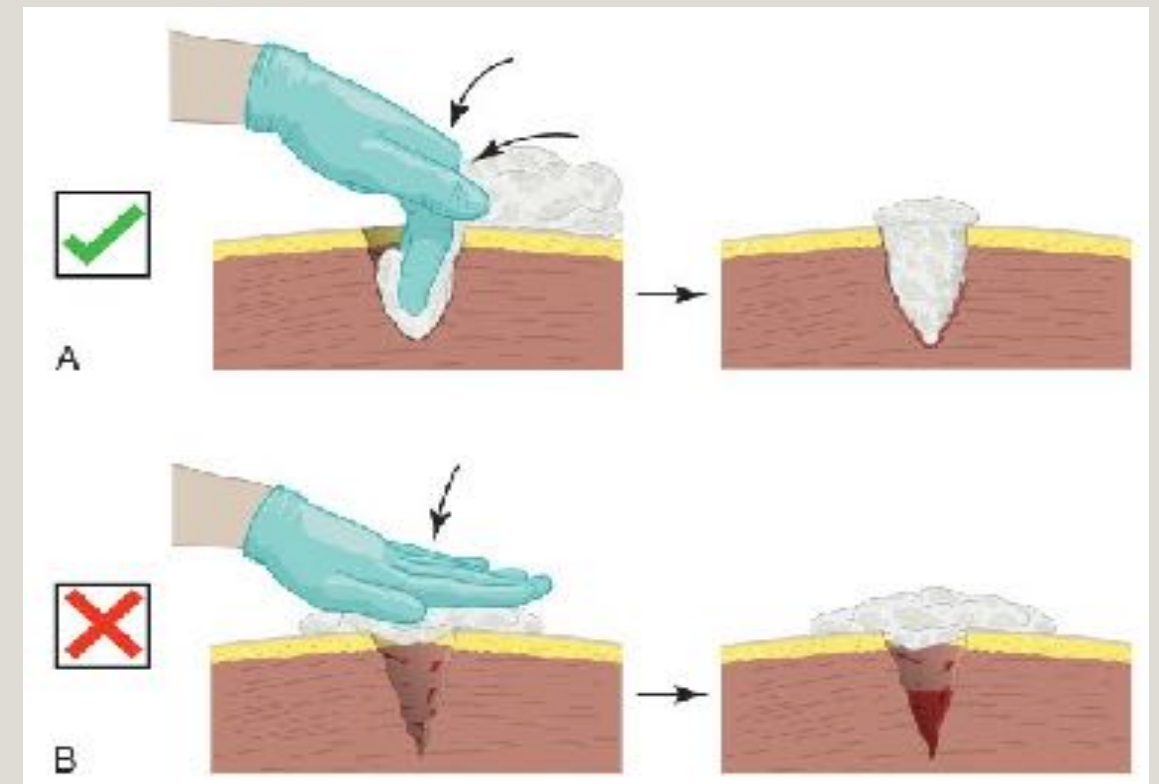


Photo courtesy of Adam Wehrle, NREMT-P.

ABCs of Bleeding Control

C Compress - Packing

- For large wounds, superficial pressure is not effective
- If **bleeding** is from a deep wound, pack gauze tightly into the wound until it stops the **bleeding**; hold pressure until help arrives



Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Wound Packing -

- Quickly apply and hold pressure directly on the packed wound until relieved by medical responders
- If initial packing and direct pressure fail to stop the bleeding and a tourniquet cannot be applied, pack additional layers of gauze on top of the first and reapply pressure using increased force.

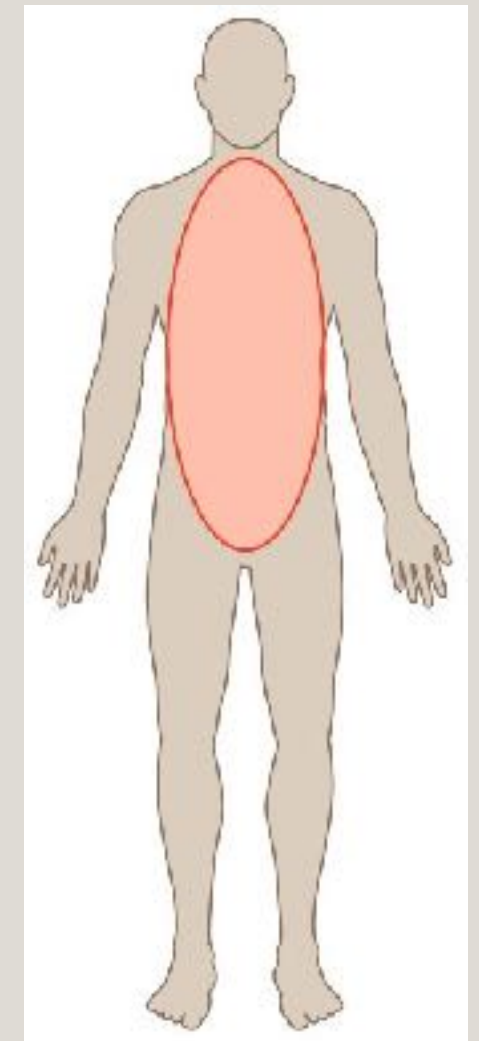
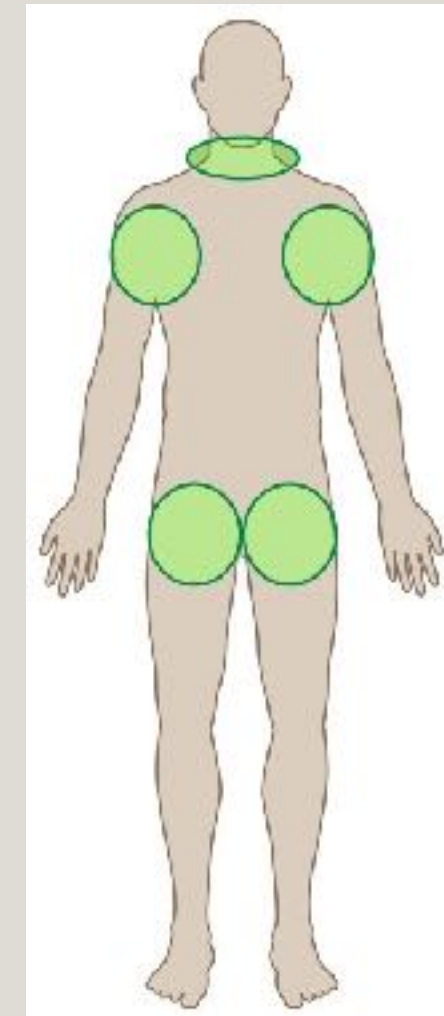
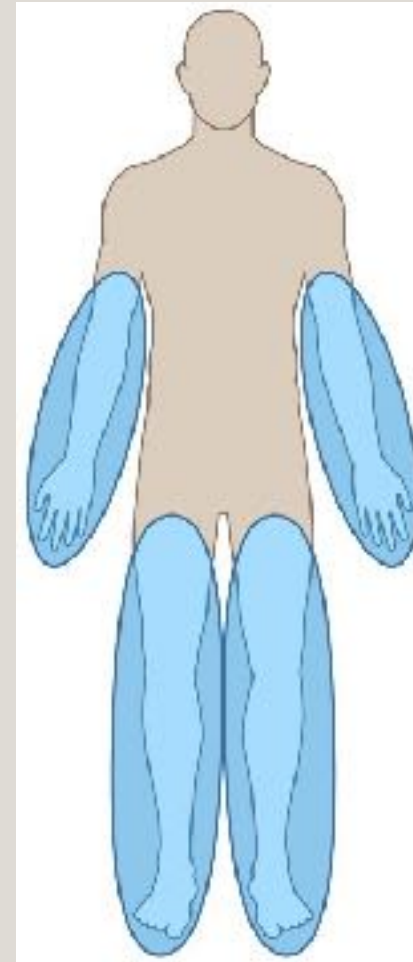


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ABCs of Bleeding Control

C Compress - Packing

- Arms and legs
- Neck, armpits, and groin
- Body



C • Compression: Stop the Bleeding (continued)

- **The Tourniquet**
- A tourniquet is a device that stops the flow of blood
- If applied correctly, the tourniquet will stop blood flow into the extremity and out of the wound
- This limits blood loss and may prevent the patient from going into shock or dying



Photo courtesy of Norman McSwain, MD, FACS, NREMT-P.



C • Compression: Stop the Bleeding (continued)

Tourniquet Application

- **Apply immediately if life-threatening bleeding is seen from an arm or a leg**
- The tourniquet can be placed right on top of clothing, if necessary
- Place above the bleeding wound (high on the arm or leg (groin)) - **“HIGH AND TIGHT”**
 - **BUT...**
 - **DO NOT apply directly over the knee or elbow joints**
 - The bones of the joint will prevent the tourniquet from compressing the artery, so you won't stop the bleeding
 - **DO NOT apply directly over a pocket that contains bulky items**
 - Anything in a pocket that is underneath a tourniquet will interfere with the function of the tourniquet
- **Tighten down the tourniquet until bleeding stops - PERIOD!!**

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Tourniquet Types

Military research has shown these three tourniquets work the best to control bleeding



Photo courtesy of Peter T. Pons, MD, FACEP

Combat Application Tourniquet (C.A.T.)



1st Generation

Photo courtesy of Peter T. Pons, MD, FACEP



2nd Generation

Photo courtesy of Peter T. Pons, MD, FACEP

SOF Tactical Tourniquet (SOFTT)



Photo courtesy of Delfi Medical Innovations, Inc.

Emergency and Military Tourniquet (EMT™)

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

C.A.T. Tourniquet

Combat Application Tourniquet

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



Photo courtesy of Composite Resources, Inc.

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Key Points (1 of 2)

Using one of the recommended tourniquets is a safe procedure.

If the bleeding is not stopped with one tourniquet and it is as tight as you can get it, apply a second one, if available, just above the first and tighten as before



Bleeding control in children

- **In all but the extremely young child, the same tourniquet used for adults can be used in children.**
- **For the infant or very small child (tourniquet too big), direct pressure on the wound as described previously will work in virtually all cases.**
- **For large, deep wounds, wound packing can be performed in children just as in adults using the same technique as described previously.**

FAQs

- **Impaled objects?**
- **Improvised tourniquets?**
- **Loss of arm or leg?**
- **Pain?**
- **Other questions?**

Summary

✓ Personal safety

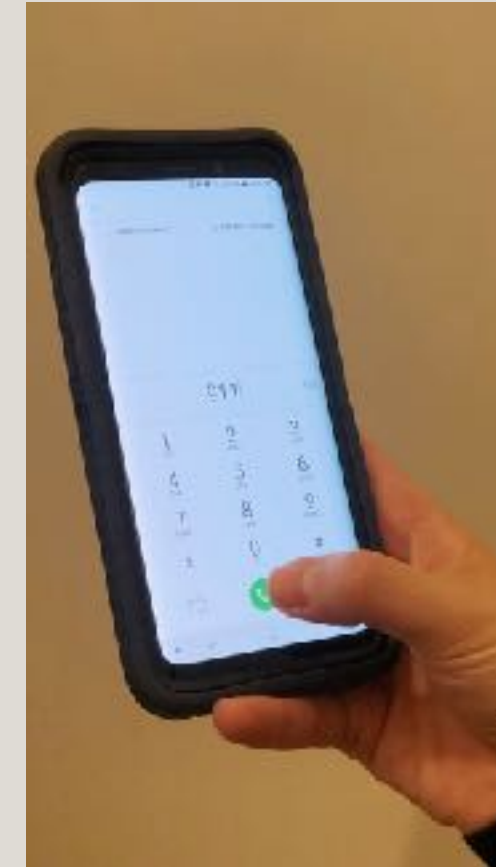
A Alert 911

B Find **bleeding**

C Compress with **pressure and/or packing**

C Compress with **a tourniquet**

✓ Wait for help to arrive





STOP
THE BLEED[®]

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

For further information and additional resources: w1emt@arri.net or please visit

BLEEDINGCONTROL.ORG

STOPTHEBLEED.ORG

THANK YOU!

Primary Principles:

ABCs of Bleeding



C • Compression: Stop the Bleeding (continued)

Wound Packing and Tourniquet Practice