# STOP THE BLEED

## Civilian Responder

# SAVE A LIFE

**Presented By:**

MED Training and Consulting

THE COMMITTEE ON TRAUMA

American College of Surgeon — Inspiring Quality: Highest Standards, Better Outcomes — 100+years

INDIANA 1ST Emergency Response Group


## Andy Grote About The Instructor

- 14 years of EMS experience with 12 years as a Paramedic
- Assistant EMS Director with Steuben County EMS
- Paramedic with West Central Fire District
- Tactical and Special Events Paramedic
- Certified ACS Stop the Bleed Instructor
- Prehospital Trauma Life Support Instructor

## *YOUR* safety is *YOUR* first priority

- Be an asset; not a liability
- 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*
- 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

# Objectives of Stop the Bleeding

1. **By recognizing life threatening hemorrhage in the prehospital setting**
2. **Treatment of life threatening hemorrhage through the application of tourniquets, wound packing, and pressure dressings**
3. **Treatment of chest and thoracic injuries, and prevention of hypothermia**
4. **Understanding the does and don't of prehospital hemorrhage control**

- ***Trauma is the leading cause of death in individuals less than 45 years of age***
- ***Hemorrhage is the second leading cause of death in individuals less than 45 years of age***
- ***Trauma is 4th leading cause of death for all age groups***

# ABC of Bleeding

- **A- Alert**
  - Be alert to your surroundings and personnel safety
  - Alert 911
  - Follow the direction of 911 dispatchers
- **B- Bleeding**
  - Recognizing life threatening bleeding
- **C- Compression**
  - Treatment of bleeding through the application of tourniquets, pressure dressings, and wound packing

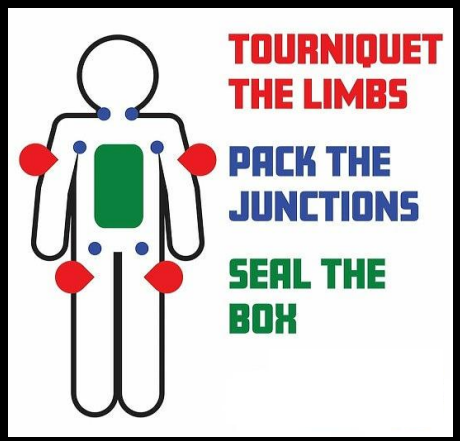
# What is Life Threatening Bleeding?

***3 Minutes***

***5 Minutes***

***7 Minutes***

# Assessment- Where is the wound?




- ***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***
- ***Junctional Wounds***
  - Neck, shoulder, and groin
  - Bleeding can be controlled by ***direct pressure and wound packing***
- ***Chest- Front, back, or side- "THE BOX"***
  - Usually cause internal bleeding
  - This bleeding CANNOT be stopped outside the hospital setting
  - These victims need rapid transport to a trauma center
  - ***DO NOT WOUND PACK APPLY CHEST SEAL***

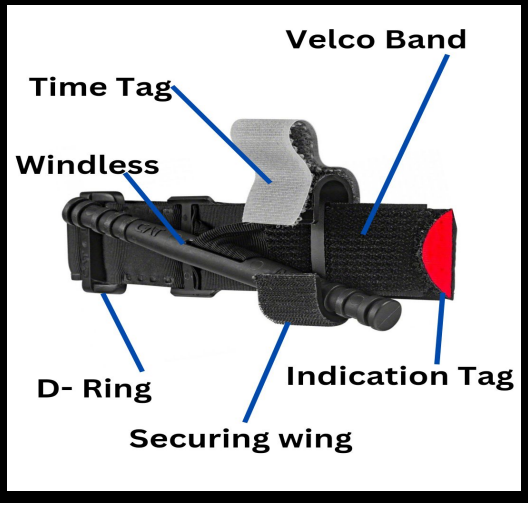
# Find the Bleeding

- Find where the victim is bleeding from- ***FULL BODY***
  - Open or remove the clothing so you can identify all 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 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

# *Direct Pressure- Step #1*

- Use your hand or fingers - Use two hands, if at all possible, PLUG THE HOLE
  - Effective most of the time for external bleeding - Direct pressure can stop even major arterial bleeding
- Bleeding control requires very firm, continuous pressure
- To be effective, apply pressure with the victim on a firm surface to provide support
- Don't release pressure to check the wound

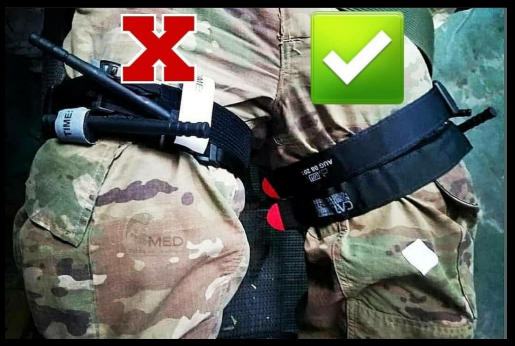
# Tourniquet Anatomy




# Tourniquet Application- Step #2

- ***RED INDICATION TAB- TOWARDS BLOOD!!!***
- **Non-Tactical: Place TQ *2 to 3 Inches above POI***
- **Tactical : High and Tight**
- ***DO NOT apply directly over the knee or elbow joints***
- ***DO NOT apply directly over a pocket that contains bulky items***

# Tourniquet Application



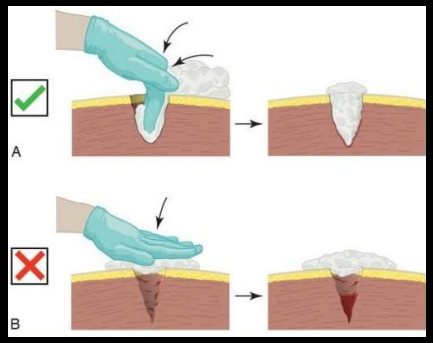
- Once TQ is applied, If the bleeding is not stopped with one tourniquet and it is as tight as you can get it
  - Place a second TQ, if available, next to the first and tighten as before
- ***Tourniquet Pain***
  - Tourniquets HURT when applied effectively
  - Pain DOES NOT mean you put on the tourniquet incorrectly
  - Pain DOES NOT mean you should take the tourniquet off
  - Once paramedics arrive, they will treat the pain with medication

# Common TQ Mistakes

- Not using a tourniquet or waiting too long to apply it when there is life-threatening bleeding
- Not making the tourniquet tight enough to stop the bleeding
- Not using a second tourniquet, if needed
- Periodically loosening the tourniquet to allow blood flow to the injured extremity
  - Causes unacceptable additional blood loss ***DO NOT LOOSEN!!***

# Wound Packing- Step #3

- Open clothing around the wound
- Locate the source of life threatening bleeding
- If possible, remove excess pooled blood from the wound while preserving any clots already formed in the wound
- Pack the wound with either a hemostatic/ non hemostatic gauze, or any available cotton based materials
- Pack directly into the wound (in all directions) feeling for the arterial blood flow, and directly placing pressure on the injured vessel. Pack the wound fully, making sure blood flow has been occluded at the POI.
- **HOLD FIRM PRESSURE ONCE PACKED- 3 to 5 minutes**




# Non-Hemostatic Gauze

*What is a non- hemostatic gauze?*

- Gauze that doesn't promotes/ induces clotting in junctional areas where a TQ is not able to be placed.

*Common kurlex or traditional wound packing gauze*

- Benefits:
  - Inexpensive
  - Readily available
  - Non-perishable
  - Multipurpose use
- Cons:
  - May not control all bleeding
  - May require large amounts

# Hemostatic Gauze

*What is a Hemostatic Gauze?*

- Gauze that promotes/ induces clotting in junctional areas where a TQ is not able to be placed.

*The "Ideal" Hemostatic Gauze*

- Little to no training, inexpensive, non-perishable, and control hemorrhage from any source, and does not create a thermal reaction.

*Currently, no one product meets these needs*

*Brands of Hemostatic Gauze*

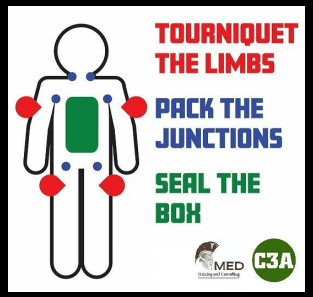
- QuikClot
- Celox/ Hemcon


# Pressure Dressing

- Used to apply additional pressure once wound packing has be completed and to secured packing in place.
  - Can be either a 4" or 6" wrap
  - Examples of pressure dressings include:
    - Olaes Modular Bandage
    - NAR Emergency Trauma Dressing
    - Israeli T3 bandage
    - ACE Bandage

# Applying Junctional Pressure Dressing

- **Neck**
  - Wrap from point of injury (POI) to opposite armpit
  - **DO NOT** occlude both side of the neck
  - Secure arm to side
- **Armpit**
  - Wrap from POI around the arm x2 then around the posterior back to the other armpit then back around to POI site
  - Or from POI to opposite side of the neck around
  - Secure arms to side
- **Groin**
  - Leave belt in place. Tie off a 6" Ace Bandage, then wrap from the belt over the POI to the posterior side. Wrap around the belt, and back over the POI. Wrap until packing is held in place, and secure with square knot
  - Secure legs together.




# Life Threatening Junctional Hemorrhage


*Start at 1:25*

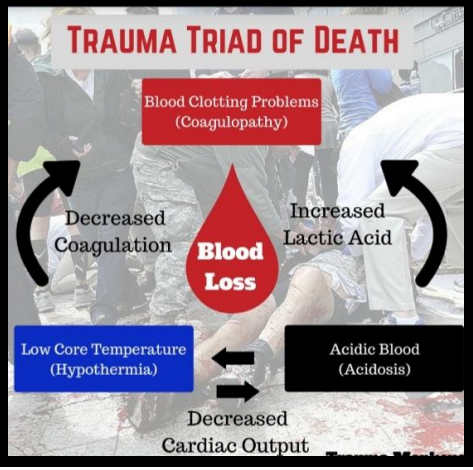
# Chest Seal Application

- ***Chest Seals are used to seal the torso***
  - Excess air in the torso from an open chest wound or penetrating injury can cause a collapsed lung (pneumothorax or hemopneumothorax)
  - Chest seals are applied from the collar bone (clavicle) to the base of the rib cage
  - Chest seals can be vented or non vented
  - Examples include:
    - HALO Chest Seal
    - Hyfin Chest Seal
    - Vaseline Gauze
  - Unconventional chest seal
  - ***Ongoing assessment***

# Hypothermic Trauma

***Hypothermia =***
***DEAD TRAUMA PATIENT***

- Normal Core Temp- 98.6
- Hypothermic Temp- 95.0
- How to prevent hypothermia
  - Wrap patient in mylar blanket
  - Remove blood soaked clothing
  - Cover with heavy blankets
  - Remove injured from cold environment




# Review

*Treatment Plan*

# Scenario #1

*Treatment Plan*

## Scenario #2

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## Questions?

Practicing Wound Packing
& TQ application