

2022 CPT First Aid-CPR-AED



CPT - Schedule

- 1) Introductions
- 2) Skills CPR, Rescue Breathing, AED
- 3) Tourniquet Refresher / Tactical Med
- 4) Use Of Force
- 5) Tactical Communications / Lunch
- 6) Scenarios



First Aid Schedule

Object 1: CPR/AED

- CPR Update
 - Adult CPR
 - Child / Infant CPR
- AED Update
 - Adult CPR

– Child / Infant CPR

First Aid Schedule

Object 2: Tactical Medical Training (MARCH)

- Mass Arterial Bleeding Control
- Airway / Respirations
- Circulation
- Hypothermia (Shock)



But First A Word From Our Sponsors





Overdose Symptoms

- Presence of Narcotics/paraphernalia on scene
- Unusual sleepiness
- Pinpoint or tiny pupils
- Skin feels cold and clammy
- Nails and lips are blue
- Breathing is slow or absent
- Slow heartbeat or low blood pressure.

SDSO Overdose



Reporting Use of Narcan

 Upon administering Narcan and advising the appropriate medical staff, the involved personnel or supervisor shall document the incident in a brief email; the email shall be sent to Narcan.Notification@sanjoseca.gov and contain the case #, date, time of event, and a synopsis of the incident.



CPR - Refresher

(Cardiopulmonary Resuscitation)



SJPD Case Study





Assessment

Once the scene is safe

Conducted a primary survey

Controlled or ruled out major bleeding, and has determined that there is no breathing or circulation

CPR should begin immediately



CPR Sequence C-A-B

Circulation – start compressions to get oxygenated blood to the brain

Airway – open and maintain airway

Head tilt / Chin Lift

Breath – Perform rescue breaths



CPR – Adult Compressions

Place victim on their back on a firm, flat surface.

Give 30 chest compressions.

- Hand position: Two hands centered on the chest.
- Depth: At least 2 Inches.
- Rate: 100-120 compressions per minute.
- Allow the chest to return to normal position after each compression.



CPR – Adult Breaths

After 30 compressions, Give 2 breaths.

- Open the airway to a past neutral position using the headtilt/chin-lift technique.
- Ensure each breath lasts about 1 second and makes the chest rise: allow air to exit before giving the next breath

If 1st breath does not cause the chest to rise, retilt the head and ensure proper mask seal before giving second breath. If on 2nd breath no chest rise is visible an object may be blocking the airway.



CPR

CPR must be continued until:

The victim's breathing and circulation resumes

The officer is relieved by an equally or higher medically trained person

An AED arrives

The officer is too exhausted to continue

The scene or situation becomes unsafe



CPR Video / Practical





Responsibility to Act

Peace Officers have a responsibility to:

Assess emergency situations

Initiate appropriate medical services within the scope of the officer's training and agency policy.



Immunity from Liability

Protected from liability for civil damages, emergency rescue personnel must:

Act within the scope of their employment

Act in good faith, and

Provide standard care within the scope of their training and agency policy.



Negligence

Provides Care beyond scope of training or act in a grossly negligent manner, they can be held liable for any injuries they may cause.

Failure to provide care, even though the officer has received training to do so, may lead to the officer being liable for injuries for the lack of care. (e.g., fear of contagious or infectious disease))



L 2638.1 PROVIDING FIRST AID AFTER THE USE OF A FIREARM:

If a person is injured by a Department member's use of a firearm, whether on-duty or off-duty, whether intentional or unintentional, the following steps shall be taken as soon as practical: - Immediately summon emergency medical aid - Check breathing and heartbeat at the scene - Administer first aid if required



L 4304 RENDER ASSISTANCE TO THE VICTIM(S):

The first responsibility is to the victim. The injured must receive the highest priority even if this permits the suspect to escape. Therefore, the first arriving officer will ensure that the victim receives emergency first aid and further medical care as necessary. This task may be delegated to other competent persons or officers but the responsibility to ensure that this task is accomplished remains with the first arriving unit.

Expressed Consent

Identify yourself when asking for consent

Consent must be obtained before obtaining care

III or Injured must be:

Conscious and oriented

Mentally competent

18 y/o or emancipated minor



Implied Consent

Implied Consent is a legal position that assumes that the unconscious or confused victim would consent to receiving emergency medical services if they were able to do so

Responsibility to administer emergency medical services when the victim is:

Unconscious

Incapable of giving consent due to developmental issues, emotional, or mental disability

Altered mental state (alcohol, drugs, head injury)

Juvenile and parent/guardian not present



Refusal of Care

A conscious and competent adult has the right to refuse any emergency medical services offered by EMS. The refusal must be honored as long as the person is mentally competent.

Life-threatening Conditions if left untreated, EMS may provide medical services regardless of the victims conscious condition.



CPR Compression to Breaths

Solo Rescuer

Adult, Child, and Infant 30:2

Two Rescuer

Adult is still 30:2

infant and child drops down to 15:2





Infant CPR Video CPR



AED

Turn on AED

Voice Instructions

Adhere pads to patient's bare chest

Allow AED to analyze heart rhythm

Deliver shock if directed to do so

Make sure everyone is clear prior to delivering shock (give warning)

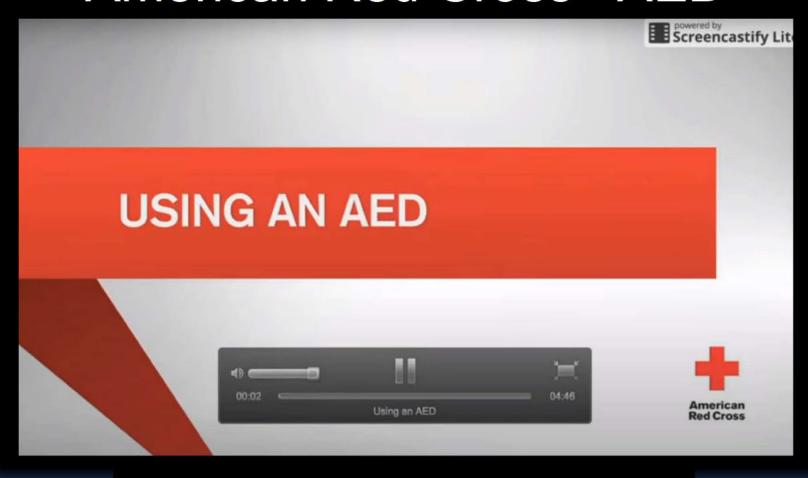
CPR

Follow additional directions of AED

DON'T STOP unless you are relieved, too tired to continue or there are signs of life



American Red Cross - AED





Rescue Breathing

Determine responsiveness and breathing.

Activate EMS if unresponsive

Has pulse no breathing begin rescue breathing (one breath every 5-6 seconds)

Recheck vitals after 2 minutes

Pulse found continue rescue breathing

If no pulse begin CPR



AED Considerations

Problem with pads?

May not be completely adhered to skin or poor connection to AED (press firmly on pads and check cable connector)

Chest is wet or chest hair?

Wipe chest dry (apply new pads), shave hair or remove pads to remove hair (apply new pads)

Battery

Replace with fresh battery

Surgically implanted device in chest?

Pacemaker or Implantable Cardioverter-defibrillator (noticeable lump/scar may be visible), adjust pad placement at least 1 inch away from device

Medication patch?

Remove patch, wipe away any residue, replace pad

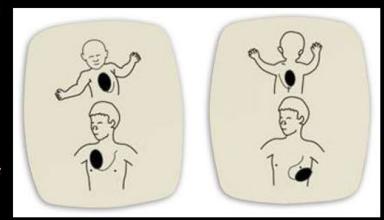


AED on Infant/Child

Most AED's have specially designed pads or mechanisms that reduce defibrillation energy to a level more appropriate

If these pads/mechanisms are not available an AED configured for an Adult can be used

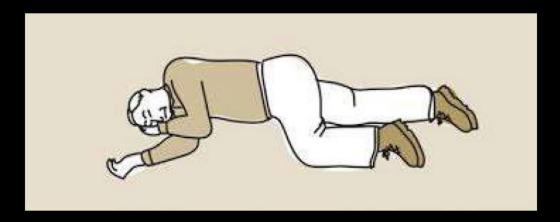
Place the adult pads on the front and back of child or infant's torso





Recovery Position

Extend arm closest to you along side the persons head bend to 45 degree
Bring other arm across the chest, placing back of hand against cheek
Grasp the far leg above the knee and pull up so the foot is flat on the ground
Grasp Shoulder and hip and roll victim toward you





Tactical Medical

MARCH Mnemonic

- M Massive Hemorrhage
- A Airway
- R Respirations
- C Circulation
- H Hypothermia (Shock)



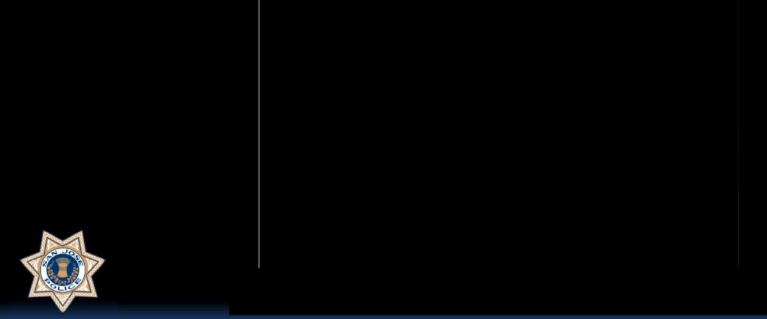
Care Under Fire MARCH (Massive Hemorrhage)

Hot Zone

Care Under Fire is the care rendered at the scene of the injury while responding LEOs and the casualty are still under hostile fire. Available medical equipment is limited to that carried by the casualty or the responding LEOs.



Care Under Fire MARCH (Massive Hemorrhage)



Care Under Fire Tourniquet Application

Placement:

"High and Tight"

Tightness:

Tight enough to stop bleeding and distal pulse

Any amputation.

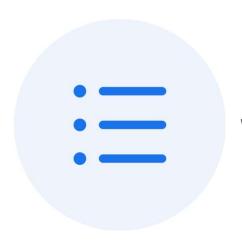
Above knee/elbow may be more effective.

Self Application/Buddy Application.

Mark casualty with "T" and time.



slido



What Tourniquet(s) do you carry?

Tourniquets – Common Types

- Combat Application Tourniquet (CAT)
- Special Operation Forces Tactical Tourniquet (SOFT-T)
- Stretch, Wrap, and Tuck (SWAT T)
- Rapid Application Tourniquet (RAT)



Houston PD Shooting

WARNING

THE FOLLOWING VIDEO CONTAINS GRAPHIC CONTENT
THAT MAY BE DISTURBING TO SOME VIEWERS
DISCRETION IS ADVISED



Debrief

Does the scene ever become a warm zone?

- Can a warm zone become hot again?
- What ways can we make a hot zone a warm zone?

First officer shot: why does his bleeding increase?

Second officer shot: Who's is job is it to administer care.



Las Vegas PD





"I will tell you that that personal decision by that officer to not utilize gloves is stellar".

"The fact that he was willing to jeopardize his own safety with blood-borne pathogens to save that man's life by putting a tourniquet on his leg was a very good decision that day."

Clark County Assistant Sheriff Todd Fasulo





Universal Precautions

Personal Protection Equipment

Latex Gloves

CPR mask (one way valve)

N95 mask

Eye protection

Proper Removal of Gloves
Wash hands frequently
Cover your wounds





PPE Disposal

Gloves, along with other single use equipment must be disposed of in an approved manner.

Biohazard Bags

Sharps Container

Liquid Proof Container





Roles and Responsibilities

Ensuring Officer Safety

Evaluate the emergency situation

Take necessary Law Enforcement actions related to the incident

Initiate care for injured and public safety



I-FAK

 I-FAK can be obtained from central supply and contain the following:

- Occlusive Bandage (2 Way Seal)
- 2 X Sterile Non-Stick Pads
- CPR Mask
- Israeli Bandage (Pressure Bandage)





I-FAK

- What is it missing?
 - Tourniquet
 - Tape
 - Gloves / PPE
 - Consider Adding Extra Gauze
 - Dowel / Stick





Tactical Field Care

Warm Zone

- Tactical field care is the care rendered by the medic once he and the casualty are no longer under effective hostile fire.
- It also applies to situations in which an injury has occurred on a mission but there has been no hostile fire.
- Available medical equipment is still limited to that carried into the field by mission personnel.
- Time to evacuation may vary from minutes to hours.

Hemorrhage – Hemostatic Agents

QuickClot Combat Gauze:

- Made of clay material (Kaolin)
- Impregnated gauze.
- Used to accelerate clotting.





Hemorrhage – Hemostatic Agents





Tactical Field Care MARCH (Airway)

- Hand on forehead and tilt head back
- Use other hand to lift chin and open mouth
- Use only when no cervical spine injury is suspected





Tactical Field Care MARCH (Respiration) "Sucking" Chest Wound

 A hole in chest wall that may let air into the chest cavity rather than into the lungs, causing the affected lung to collapse



Tactical Field Care MARCH (Respiration) "Sucking" Chest Wound



Tactical Field Care MARCH Occlusive Chest Seals







Tactical Field Care MARCH Improvised Chest Seal (3 sides with vent)





Tactical Field Care MARCH (Circulation)

Pressure Dressing:

- EmergencyBandage
- Improvised





Tactical Field Care MARCH Hypothermia/Shock

- Signs/Symptoms:
 - Shivering
 - Body generates 5 6x more body heat while shivering
 - Ability to shiver can be decreased by alcohol use, medications, burns, or drugs
 - Skin initially red, then pale, then cyanotic, then grey
 - Increase in respirations and pulse in early stages
 - Altered mental status



Nature of III or Injured Persons

Number of victims

Apparent age of the victims

Whether victim(s) are conscious or unconscious

Appearance of injury

Heavy Bleeding

Exposed bone

Location of Wound



Need for Additional Resources

Fire Department

Additional Officers

EMS

Public Utilities

Other Specialty Units

Hazmat

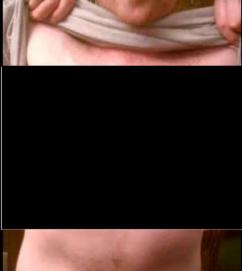
Search and Rescue



Do Not Resuscitate (DNR)

Individuals who are terminally ill may have given specific DNR instructions







Duty to Continue

Once an Officer begins first aid, that officer remains with the victim until:

Relieved by someone with equal or greater training

The scene becomes unsafe

You are physically unable to continue

Exception: Mass casualty incident in which number of victims exceeds rescuers



Victim Assessment

Two Part Process

Primary Assessment and Secondary Assessment

Check Responsiveness "Are you ok?"



Primary Assessment

A rapid, systematic process to detect life-threatening conditions

Check for responsiveness

Check (ABC)

Airway

Breathing

Circulation (pulse)

Control Major Bleeding

Treat for shock

Consider C-spine (spinal injury)



Secondary Assessment

Systematic examination to determine whether injuries exist

Vital Signs

Skin Color

Temperature

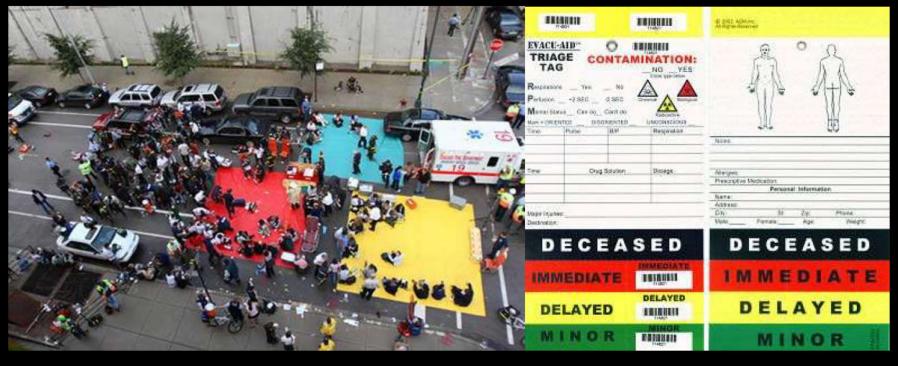
Respiratory Rate

Pulse Rate

Gather Info on the victim and incident

Conduct head-to-toe exam to identify injuries







Quickly move to victim to victim (60 secs) and quickly assess their condition and classify

DECEASED

IMMEDIATE

DELAYED





DECEASED

Obviously Dead

No ventilations present after the airway is opened



IMMEDIATE

Ventilations present after positioning the airway or ventilations are over 30 per minute or capillary refill greater than 2 seconds or no radial pulse or cannot follow simple command.



DELAYED

Any patient not in the immediate or minor categories.

These patients are generally non-ambulatory



MINOR

Any patient requiring medical attention who is not immediate or delayed and who is able to walk.



Moving a Victim

An unconscious injured victim should be treated as spinal injury

Only move if necessary to prevent further injury

Identify a safe location prior to moving the victim

Shoulder Drag





Clinical Death

A victim is clinically dead the moment breathing and circulation stop.

May be reversible if basic life support techniques are used (AED/CPR)

Biological Death

Begins between 4 to 6 minutes after breathing and circulation have stopped. Brain cells begin to die due to the lack of oxygen.



Declaring Death

An officer cannot pronounce death but can recognize obvious signs of death

Lividity

Rigor Mortis

Decapitation

Decomposition

Incineration

Removal of vital body organ (Brain, Heart, Lungs)



Conscious Choking

Ask "Are you choking", "Can I help"

Confirm victim is choking

Stand behind patient

Make fist with thumb side against abdomen just above navel and below ribs (grasp fist with other hand)

Give Thrusts

Quickly, inward and upward

Continue until patient can breathe normally

Becomes Unresponsive

Lower to ground face-up, EMS (if not done), **CPR**, Look in mouth for object (<u>no blind finger sweeps</u>), continue until signs of life or relieved



Unconscious Choking

Lower to ground face-up, call EMS if not done

30 chest compressions

Look in mouth for object, if you see object carefully take it out (<u>no blind finger sweeps</u>)

Attempt rescue breath, if unsuccessful, readjust airway and reattempt breath, if still unsuccessful, continue 30 compressions, and check for object



Continue cycle until airway is clear and breath is successful

Airway Obstructions

Lower to ground face-up, call EMS if not done

30 chest compressions

Look in mouth for object, if you see object carefully take it out (no blind finger sweeps)

Attempt rescue breath, if unsuccessful, readjust airway and reattempt breath, if still unsuccessful, continue 30 compressions, and check for object

Continue cycle until airway is clear and breath is successful



Shock

What is it?

Poor blood flow that creates shortage of oxygen to body tissues.

Signs

Victim may appear uneasy, restless or worried

(more serious signs - responsiveness may diminish, skin can be pale, cool and sweaty)

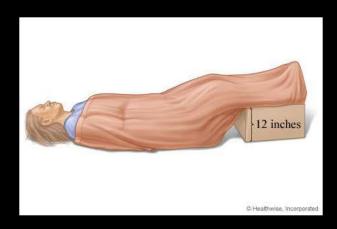


Shock

EMS and Hospital

Maintain open airway

Maintain normal body Temperature



If a person is responsive and breathing normally, it is reasonable to place or maintain the person in a supine position

If there is no evidence of trauma or injury (simple fainting, shock from non traumatic bleeding, sepsis, dehydration), raising the feet about 6 to 12 inches (about 30° to 60°) from the supine position is an option that may be considered while awaiting arrival of EMS, if no discomfort to victim.



Respiratory Emergencies

Asthma, cardiac problems, allergic reactions

Symptoms

Short of breath, wheezing, cyanotic

Treatment

Position of comfort, reassure, assist with Rx (inhalers)

Anaphylactic shock

Severe allergic reaction best treated with Benadryl and or Epi-Pen auto-injector
This may be administered through clothing and is not a cure but temporary treatment.
Call 911



Stroke Video



Stroke

Signs

Slurred speech, weakness or paralysis on one or both sides, facial droop, blurry vision, sudden headache, speech problems, confusion

Treatment

Place conscious victim in a semi sitting with head and shoulder slightly elevated Unconscious victims should be in the position of recovery weak side down Monitor ABC's and treat for shock, nothing by mouth



Poisoning

Exposure to chemical, biological, radiological or nuclear (CBRN) substances

Recognition of exposure

Scene safety and protection

Poison control system

Find out what, when and how much

Call 911 and poison control

Do not give anything by mouth unless directed by poison control

Do NOT dilute with water or anything else unless directed by poison control

Assist with administration of naloxone

Consider all safety issues especially around drug labs, suicides

If necessary remove victim from toxic environment and monitor

Responding to a CBRN incident





Poisoning

Respond uphill, upwind, and upstream

Stay calm, do not panic.

Follow directions, which may include: Egress from known hazards

Stand-by for HAZMAT to arrive

Remain in place

Close all windows, doors and turn off fans





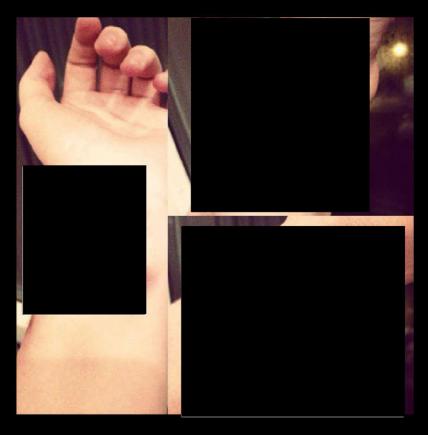
Stings and Bites

Human bites

Wash with soap and water and transport

Animal bites

Wash with soap and water and transport Allergic reactions and anaphylaxis





Stings and Bites

Epinephrine auto injector

Assisted epinephrine auto injector and accessing EMS

Actual administration of Epi is an optional skill, and training for administration is strictly within the authority of the LEMSA, not POST.

Define and review the characteristics of Anaphylaxis:

Mild:

Stuffy nose, sneezing and itching around the eyes.

Itching skin.

Raised, red rash on the skin Severe:

Trouble breathing
Swelling of tongue and face
Signs of shock





Stings and Bites

Steps of use for epinephrine auto injector:

Remove the auto-injector from its protective case.

Remove the safety release mechanism to arm the device, making sure that the appropriate end is perpendicular to the middle of the outer thigh.

Firmly push the auto-injector against the middle of the outer thigh until you hear a clicking sound. This can be done through clothing, if needed.

Hold firmly against the thigh for 5-10 seconds (depending on the manufacturer) to deliver the medication.

The victim or the person administering the injection should rub the injection spot for approximately 10 seconds



Diabetic Emergencies

Insulin Shock Diabetic Coma

Can come on suddenly Usually slow onset

More common

Onset

Skin Pale, cold, moist, clammy Red, warm, dry

Profuse perspiration

Breathing Otherwise normal breathing Labored breathing

Breath has sickly sweet (fruity) smell

Mental Hostile or aggressive behavior Decreased level of consciousness

Status Fainting, seizure Restlessness

May appear intoxicated Confusion

May appear intoxicated

Pulse Rapid pulse Weak, rapid pulse

Other Dizziness, headache Dry mouth, intense thirst

Excessive hunger Excessive hunger

Drooling Excessive urination

Nausea or vomiting Abdominal pain, vomiting

Sunken eyes



Heat Exhaustion

Heavy sweating, pale cool skin

Nauseous and or vomit

Complain of headache or dizziness and feel weak





Heat Stroke

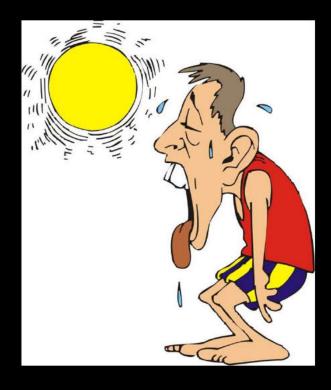
Signs

Body temperature rises significantly
Skin can become red, very warm, or even hot and completely dry
Heavy sweating (can be present especially when exertion is the cause)
May collapse and have a seizure

What to do

EMS

Spray/pour water and fan them
Apply ice packs to neck, groin, and armpits
Cover with wet sheet and continue to fan
Best method, when possible, immerse in cool water up to neck
Unresponsive → Recovery position





Childbirth Emergencies

Childbirth emergencies

Labor indicating eminent childbirth

Contractions less than 2 minutes apart

BOW broken

Previous deliveries

Bleeding before and after delivery

Do not pack

Clean cloth over vagina and rapid transport knee chest position





Electrical Hazards

Never, ever touch a downed power line or go near one. Power lines are not insulated like power cords. Always assume the power line is live.

Beware of vehicles or objects in contact with light poles, electrical boxes, and other electrified objects

Charged wires and objects can be silent, not always sparking

Stay a minimum of 10 feet from any power line or source

Don't touch a fallen power line or anything touching the wire.

Do not touch anything or anyone in contact with a fallen power line or other electrified object, such as a light pole .

Do not drive over a fallen power line.

Wait until PG&E advises that POWER IS OFF



Traumatic Injuries



Bleeding Types

Arterial

Venous

Capillary

REMEMBER- Major Bleeding is a leading cause of death in trauma injuries



Arterial Bleeding

Blood flowing from the heart

Bright red



Initially spurts from the body in time with the heart beat, but may slow with time

It is ALWAYS a severe bleed and is definitely life threatening



If not stopped a person can bleed to death quickly

Venous Bleeding

Blood flowing to the heart

Dark red or purple





Capillary Bleeding

Usually the result of a small surface wound

This is minor and non life threatening





Stop the Bleeding

Head to toe exam is critical!

Not always obvious, consider incident and mechanism of injury

Clothing may conceal bleed

Remove or loosen clothing to expose body

Officers vests may conceal bleed

Darkness and low light environments



Feel for wet clothing

Stop the Bleeding

Direct pressure (clean absorbent pad or gloved hand)

Pressure bandage (use roller gauze or elastic bandage

Tourniquet







Tourniquet Application

Severe extremity bleeding:

Unresponsive to pressure

Massive extremity wound

Traumatic amputation

If severe bleeding is obvious a tourniquet may be the first and BEST solution, DON'T WAIT!

Apply high above injury (Go High Or Die)

Tighten until bleeding stops



Severe Bleeding

Leading cause of trauma death

Getting a victim to a trauma center is PRIORITY!

TIME IS CRITICAL

Is waiting for EMS may not be the best solution?

What's the environment?

What's the location?

Roadways blocked?

ETA of EMS?

Staging?

Self care!

Transport in police car?



Self Care

If you are seriously injured

Don't wait to be rescued!

Save yourself!

Utilize your training and knowledge



Internal Bleeding

Can be difficult to detect

Consider type and mode of injury

Suspect it if chest or abdomen is hit hard

Surgery may be only way to control bleeding

EMS is critical for effective treatment and possibly survival

Get victim to a trauma center ASAP



Traumatic Chest Injuries

Penetrating, gun shot, stabbing, etc..

Blunt force

Closed

Open



Penetrating Chest wounds

Gunshot, stabbing, explosion, vehicle accident, fall?

Remember, the opening can also be on the patient's back in the case of an entry or exit wound.

Check the front, back, and sides of the patient for penetrating trauma

If the patient is wearing body armor, it is important to check for atypical entry and exit sites that may occur from deflections due to the armor.

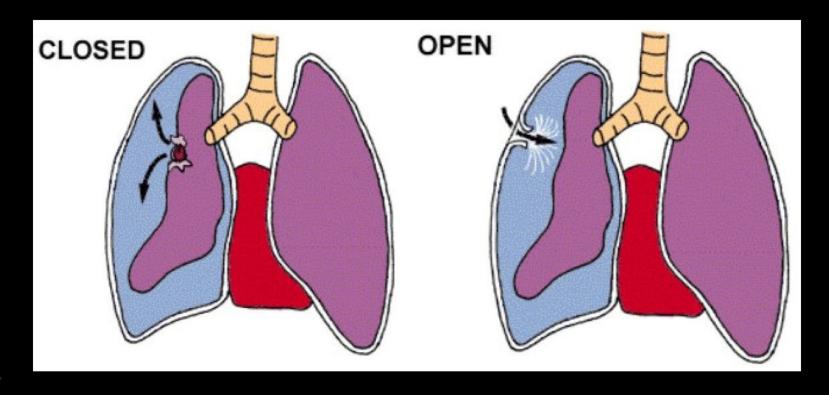


Three Kings Video





Tension Pneumothorax





Chest wounds

A Pneumothorax is a collapsed lung.

A Pneumothorax occurs when air leaks into the space between your lung and chest wall. This air pushes on the outside of your lung and makes it collapse

A pneumothorax can be (open or closed) caused by a blunt or penetrating chest injury, certain medical procedures, or damage from underlying lung disease. Or it may occur for no obvious reason.

Symptoms usually include sudden chest pain and shortness of breath.



Chest wounds

An "open pneumothorax" occurs when there is an opening in the chest wall, which can be the result of penetrating trauma such as a gunshot wound or stabbing.

This opening allows air to move from the outside of the body, through the opening in the chest wall, and directly into the pleural space.

A tension pneumothorax occurs when the patient cannot compensate for the additional air pressure, and several events begin to occur that can lead to death.



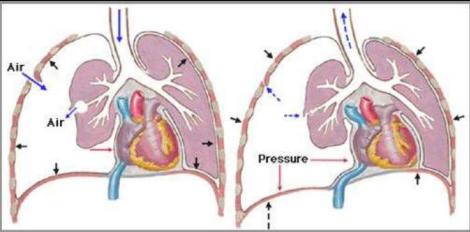
Sucking Chest wounds





Tension Pneumothorax







Amputations

Assess
Control Bleeding
Tourniquet
EMS



Open Abdominal Wounds

Cover protruding organs with thick moist dressing

<u>Do NOT</u> push organs back inside body

<u>Do Not</u> apply direct pressure Control Bleeding

Treat for shock

Assess person/injury until EMS arrives



Impaled Object

NEVER remove the object

Control bleeding

Use additional padding or bandage to stabilize object

Treat for shock

EMS





Head Injuries

Keep the person still. Until medical help arrives, keep the injured person lying down and quiet, Don't move the person unless necessary, and avoid moving the person's neck. If the person is wearing a helmet, don't remove it.

Stop any bleeding. Apply firm pressure to the wound with sterile gauze or a clean cloth. But don't apply direct pressure to the wound if you suspect a skull fracture.

Watch for changes in breathing and alertness. If the person shows no signs of circulation — no breathing, coughing or movement — begin CPR.





Disturbance of Consciousness (Drugs/Mental Illness)

Agitation

Excitability

Aggressiveness

Fear

Apathy

Confusion

Violence towards objects

Attraction to glass

Removal of clothing

Rambling or incoherent

speech

Paranoia

Unusual Strength

Rage

Shouting

Endurance

Hyperthermia

Violence towards others

Increased pain tolerance

Sudden Calmness



Absent exigent circumstances, request appropriate amount of resources prior to taking into custody

Have EMS stage

Clear the area of bystanders







Once in custody:

Designate an officer to monitor vitals

Immediately have EMS respond

Place in a seated or recovery position

EMS transports to hospital



Choking Infant

Look at Face

Silent, unable to cry, blue lips/nails/skin

Give 5 Back Blows

Give 5 Chest Thrusts

Becomes Unresponsive

Lower to ground, face-up

If alone? Provide 2 minutes CPR before activating EMS

Remove Object

Look in mouth after each set of compressions before giving breaths

Reach in to recover object only if you see it (no blind finger sweeps)



Questions?

