

1  **FIRST AID / CPR**

Corporal Dan Deis / Corporal Ray Gordano  
Pacific Grove Police Department  
(831) 648-3143  
[ddeis@cityofpacificgrove.org](mailto:ddeis@cityofpacificgrove.org)  
[rgordano@cityofpacificgrove.org](mailto:rgordano@cityofpacificgrove.org)

2  **Housekeeping**

- ▶
- ▶ Scene Safety
- ▶ PPE
- ▶ CPR
- ▶ AED
- ▶ First Aid
- ▶ Shock

3  **LAW ENFORCEMENT AND EMERGENCY MEDICAL SERVICES**

Peace officers must recognize they have a responsibility to act in good faith and to provide emergency medical services (EMS) to the best of their abilities and within the scope of their training.

4  **INTRODUCTION**

The first person at the scene of an emergency situation is often a peace officer.

When the situation involves a medical emergency, peace officers assume the role of EMS first responder.

5  **PRIMARY RESPONSIBILITIES**

As first responders, peace officers should assume the primary responsibility for:

- ▶ Ensuring officer safety as well as the safety of ill or injured individuals and the public
- ▶ Evaluating the emergency
- ▶ Taking necessary enforcement actions related to the incident
- ▶ Initiating actions regarding the well being and care of ill or injured persons

6  **RESPONDING TO THE SCENE**

The primary objective of all peace officers responding to any emergency call should be to get to the location as *quickly and safely as possible*.

7  **Police Car Crash**

8  **SCENE ASSESSMENT**

At the scene peace officers should evaluate the nature of the incident and communicate critical information to dispatch and other

involved units as soon as possible. The following table identifies several factors that may be considered when evaluating the scene:

9  **SCENE ASSESSMENT**

10  **SCENE ASSESSMENT (cont'd)**

11  **Safety**

12  **SAFETY**

Peace officers are responsible for taking action to protect their own safety as well as the safety of other EMS personnel, the ill or injured person, the public, and to control the scene.

When determining appropriate safety precautions to take, officers should consider possible dangers from:

- ▶ Exposure to biological hazards (e.g., body fluids such as blood, saliva, etc.)
- ▶ Armed suspects, angry bystanders, etc.
- ▶ Unsafe scene conditions (e.g., unstable buildings, nearby vehicle traffic, etc.)
- ▶ Environmental hazards (e.g., fire, exposure to dangerous chemicals, chance of explosion, etc.)
- ▶ Animals (e.g., pets, wild animals)

13  **ASSESSMENT AND CARE OF PATIENT**

Based on this initial assessment, officers may be required to provide basic care for the patient.

Such care may include providing basic emergency medical services until relieved of the responsibility by other personnel with equal or higher levels of training.

14  **PEACE OFFICER WELFARE AND SAFETY**

Peace officers and all others within the EMS system must take appropriate precautions at all times when in direct contact with injured patients blood or body fluids.

15  **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

16  **PPE**

17  **PERSONAL PROTECTIVE EQUIPMENT**

By using personal protective equipment (PPE), EMS personnel can break the chain of transmission and prevent possible exposure and infection. For equipment to be effective, it must be used and cared for properly.

The following table identifies standard personal protective equipment to which peace officers may have access:

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21  **PERSONAL PROTECTIVE EQUIPMENT**

Gloves, along with other equipment intended for single use, must be disposed of in an approved manner according to manufacturer recommendations after use or contamination. Disposal may include but not be limited to use of:

- Biohazard bags
- Sharps containers
- Liquid proof containers

NOTE: Peace officers are responsible for being aware of and complying with their agency's policies and Occupational Safety and Health Administration (OSHA) guidelines regarding the disposal of hazardous PPE and materials.

22  **UNIVERSAL PRECAUTIONS**

Along with using personal protective equipment, there are a number of universal precautions that peace officers as first responders in the EMS system should take.

- ▶ Treat all body fluids as if they are contaminated!
- ▶ If possible, wash hands thoroughly with warm water and antiseptic soap before and after *each exposure, even when gloves are worn*
- ▶ Use proper cleaning procedures to disinfect and decontaminate any equipment that may have been exposed (e.g., vehicle steering wheel and interior, firearm, radio, etc.)
- ▶ Use extra caution when handling broken glass or sharp objects
- ▶ Use band-aids or other cover protections when open cuts or sores exist

NOTE: A solution of one part bleach and ten parts water can be used when disinfecting equipment except leather.

23  **PERSONAL PREVENTIVE MEASURES**

Peace officers should also be aware of personal preventive measures they may take to remain healthy and support their own immune systems. Staying in good physical condition can help breach the chain of transmission of pathogens to which they may be exposed.

24  **DOCUMENTATION TO EXPOSURE**

If a peace officer is exposed to an infectious pathogen (or even suspects exposure), no matter how slight, that officer should report the exposure verbally and in writing as soon

as possible.

NOTE: Officers should be aware of and comply with their agency policies or guidelines regarding reporting exposure information should be in compliance with Health Insurance Portability and Accountability Act (HIPAA) and OSHA regulations and specific actions to be taken.

25  **PEACE OFFICER SAFETY**

Prior to and after any contact with a patient, peace officers as first responders should take *universal safety precautions* including the use of personal protection equipment (PPE) (e.g., latex gloves).

26  **PPE Exercise**

▶ Shaving cream exercise

27  **IMMUNITY FROM LIABILITY**

The California Legislature has declared that emergency rescue personnel qualify for immunity from liability from civil damages for any injury caused by an action taken when providing emergency medical services under *certain specified conditions. (Health and Safety Code Section 1799.102)*

28  **PATIENT ASSESSMENT**

Peace officers must be able to assess the immediate condition of a patient, a fellow officer, or themselves if they become injured prior to beginning any form of emergency medical services, including basic life support.

29  **PATIENT ASSESSMENT**

Once the emergency scene has been evaluated and necessary safety precautions taken, the next step for the First Responder is to assess the patient's condition. The purpose of this two-part assessment process is to identify and immediately treat life threatening conditions and to set priorities for further treatment.

There are two parts to the patient assessment process: the initial survey and the focused survey. The following table presents a brief description of each:

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31  **RESPIRATION RATE**

The act of breathing is called respiration.

Respiration Rates:

- ▶ Infant (birth – 1 year): 30-60 / min.
- ▶ Toddler (1 – 3 years): 24 – 40 / min.
- ▶ Preschooler (3 – 6 years): 22 – 34 / min.
- ▶ School-Age (6 – 12): 18 – 30 / min.

▶ Adolescent & Adult (12 – 18): 12 – 20 / min.

32  **RESPONSIVENESS**

Before taking any action, the patient's level of responsiveness (mental status) should be determined. To determine responsiveness, the peace officer should speak with the patient directly, asking, "Are you okay?" If the patient does not respond, the officer should tap the patient or shout in order to elicit a response.

33  **RESPONSIVENESS**

Depending on the level of responsiveness, a patient may be determined to be:

- ▶ Alert, awake and oriented (i.e., can talk and answer question appropriately)
- ▶ Responsive to verbal stimuli (e.g., talking or shouting)
- ▶ Responsive to painful stimuli (e.g., tapping or pinching, rubbing)
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34  **RESPONSIVENESS**

35  **ABC's (Airway/Breathing,Circulation**

When a patient is alert and able to speak, it can be assumed that the patient has a clear airway and is able to breath. If the patient is unable to speak or not responsive, then appropriate steps should be taken to check their ABCs.

36  **AIRWAY**

The airway is the passageway by which air enters and leaves the lungs. An airway obstruction may be caused by the position of the patient's tongue, head, or jaw, or some type of obstruction in their throat. The following table identifies basic actions associated with opening a patient's airway:

37  **AIRWAY**

38  **BREATHING**

After ensuring that the patient's airway is clear and open, the responding peace officer should determine if the patient is breathing.

39  **AGONAL BREATHING**

Agonal respirations are irregular, gasping breaths often seen during cardiac arrest.

In most cases, rescuers will see patients take these gasping breaths no more than 10 to 12 times per minute - that's one every five to six seconds.

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42  **CIRCULATION**

The presence of a carotid pulse, taken at a carotid artery, is the most reliable indication for the adult and child patient's heart is functioning.

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45  **CIRCULATION**

*For infants under one year, circulation should be assessed on the brachial artery (inside upper arm between biceps and triceps).*

46  **LIFE-THREATENING CONDITIONS**

Once it is determined that the patient is breathing and has a pulse, the peace officer must control any major bleeding and treat the patient for shock. Such conditions must be treated first before any further assessment of the patient takes place.

47  **INITIAL SURVEY**

An initial survey is the initial rapid systematic assessment of a patient to determine if life threatening conditions exist.

Rapid (30-45 second) check to determine:

- Responsiveness
- ABCs (Airway, Breathing, Circulation)
- Major bleeding
- Shock
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48  **BASIC LIFE SUPPORT**

Peace officers may be required to provide basic life support for a patient, fellow officer, or themselves until additional medical services become available.

49  **INTRODUCTION**

If it is determined that a patient's airway is open and no obstructions are present, yet the patient is still not breathing, the officer may attempt rescue breathing.

50  **CHECKING BACs**

Prior to beginning rescue breathing, a initial assessment of the patient should take place. The initial survey should include determining the patient's responsiveness as well as checking the patient's ABCs.

- ▶ Breathing to determine if the patient is breathing

- ▶ Airway to ensure the patient's airway is open
- ▶ Circulation to identify if the patient has a pulse

If it is determined that the patient is not responsive, has an open airway, but is not breathing, and has a pulse, then rescue breathing may be required.

51  **ABC's Practical**

- ▶ Check Patient's responsiveness
- ▶

52  **Bondi Beach Rescue**

53  **CPR  
CARDIO PULMINARY RESUSCITATION**

If a patient is unresponsive, not breathing, and has no carotid pulse to indicate circulation, then the patient is in a state of cardiac arrest. Without immediate care, the patient will die.

54  **CPR**

*Cardiopulmonary Resuscitation (CPR)* is a method of artificially restoring and maintaining a patient's breathing and circulation. CPR is a key element of basic life support.

55  **CPR**

In order to survive, oxygenated blood must circulate through the body and reach the patient's brain. In order to ensure that this process takes place, a peace officer as a first responder must:

- ▶ Maintain an open airway
- ▶ Breathe for the patient (rescue breathing)
- ▶ Physically force the patient's blood to circulate (external chest compressions)

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58  **CPR**

59  **ADULT CPR  
(ONE-PERSON)**

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63  **ADULT CPR  
TWO PERSON**

When performed correctly, two-person CPR is more efficient than CPR performed by one person. With two people, chest compressions are interrupted less and the individuals performing the CPR do not tire as easily

64  **ADULT CPR  
(TWO-PERSON)**

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68  **THINGS TO CONSIDER**

If unsure if there is a pulse, continue CPR.

All findings, counting, etc. should be announced clearly and out loud to avoid confusion between the assisting peace officers/rescuers.

When performing two-person CPR, the rescuer providing chest compressions may become fatigued and reduce the effectiveness of CPR.

69  **ADULT / CHILD CPR**

70  **CHILD CPR  
(ONE-PERSON)**

71  **CHILD CPR  
(ONE-PERSON)**

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87  **INFANT CPR**

88  **INFANT CPR – TWO PERSON**

A ratio of 15 compressions to 2 rescue breaths is recommended. One rescuer may

encircle the chest with both hands using the two thumbs together technique.

89 **PAUSING CPR**

CPR should be temporarily discontinued for only good reason (e.g., moving the patient from a location that has become dangerous).

If a temporary pause is absolutely necessary, Compressions should be paused for 10 seconds or less.

90 **STOPPING CPR**

CPR must be continued until:

- ▶ The patient's breathing and circulation resumes
- ▶ The officer is relieved by an equally or higher medically trained person
- ▶ The officer is too exhausted to continue
- ▶ Environmental hazards endanger the rescuer (e.g., gun shots)

91 **CHANGING POSITIONS**

When performing two-person CPR, one person may become fatigued and wish to change positions. The most important factor in changing positions is that it be *done together* and *take as little time as possible*.

The following table identifies the basic actions when changing positions during CPR:

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93 **GASTRIC DISTENTION**

Rescue breathing can force some air into the patient's stomach as well as lungs, causing the stomach to become distended. This condition is referred to as gastric distention. Gastric distention often occurs in children and infants.

94 **VOMITING**

If a patient vomits, the vomit may enter the lungs and cause further life-threatening complications. If vomiting should occur:

- ▶ Turn the patient's entire body (*not just the head*) to the side as one unit to
- ▶ Keep the spine straight
- ▶ Wipe the vomit from the patient's mouth
- ▶ Return the patient to the supine position
- ▶ Reopen the airway
- ▶ Continue rescue breathing
- ▶

This process should take less than 10 seconds to complete

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96 **RESCUE BREATHING**

*Rescue breathing* is the process of using one's own breaths to artificially breathe for a patient. The rescue breathing process continues until the patient is able to breathe without assistance or other breathing support is provided by EMS personnel.

97  **SCENE SAFETY**

Ensure scene safety and use Personal Protective Equipment (PPE) by taking universal precautions.

98  **RECOVERY POSITION**

If the patient resumes adequate breathing and there are no indications of major bleeding or spinal injury, then the patient can be placed in the recovery position. This position allows for drainage from the mouth and prevents the patient's tongue from blocking the airway.

To place a patient in the recovery position:

- ▶ roll the patient onto their left side toward the rescuer
- ▶ keep the patient's body in one unit with the spine as straight as possible
- ▶ move the patient's lower arm up and bend at the elbow
- ▶ move the patient's top leg toward the patient's chest, continue monitoring the patient's breathing

99  **Recovery Position**

100  **CPR – Practical Exercise**

101  **AUTOMATED EXTERNAL DEFIBRILLATORS**

The best treatment for most cases of sudden cardiac arrest is immediate treatment with a defibrillator, a device that shocks the heart out of fatal rhythm, allowing normal, healthy rhythm to resume. Automated External Defibrillators (AED) are placed in many public places. Peace officers will become familiar with the operation and location of these devices.

102  **AUTOMATED EXTERNAL DEFIBRILLATORS**

Automated external defibrillators (AED) are being placed in public transportation corridors, public buildings and venues that attract large numbers of participants (sporting events, concerts, parades, etc.) increasing public access to these life-saving devices. Peace officers should become familiar with the operation of these devices.

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103 **AED**

104 **AED**

105 **AED PROTOCOL**

The AED protocol has seven basic steps:

1. Check for responsiveness and breathing
2. Activate the EMS system if unresponsive
3. Get the AED if readily available
4. Check for pulse. A second rescuer should continue CPR until the AED is attached
5. Attach the AED electrode pads
6. Allow the AED to analyze the heart rhythm. Make sure no one is touching the patient
7. If a shock is indicated verbalize "all clear" prior to pressing the "shock" button. Follow the voice prompts from the AED
8. Current and AHA guidelines recommend that an AED should be used as soon as available.

106 **WORDS OF CAUTION**

AEDs are designed to be used for adults, children and infants.

- ▶ AEDs are safe in all weather conditions (on dry skin)
- ▶ Never place AED electrode pads directly on top of medication patches. Remove patches first and wipe the skin dry
- ▶ If the patient has a pacemaker or an internal defibrillator with a battery pack (visible as a lump under the skin, approximately two inches long) avoid placing pads directly on top of the implant
- ▶ If the patient is lying on a metal surface (e.g. bleachers) avoid contact of the electrodes with the metal surface

NOTE: Remove any jewelry from the patient's chest.

NOTE: Persons with excessive chest hair may need to be shaved prior to application of the AED electrodes.

107 **AMERICAN HEART ASSOCIATION GUIDELINES**

Current AHA guidelines recommend that "rescuers provide about two minutes of CPR before activating the AED to reanalyze the heart rhythm and attempt another shock."

Studies have shown that the first AED shock stops the abnormal cardiac arrest rhythm more than 85% of the time and that a two minute period of chest compressions between shocks can deliver oxygen to the heart increasing the likelihood of successful defibrillation.

108 **AED – Practical Exercise**

- ▶ CPR/AED Practical

109 **ABDOMINAL THRUSTS**

The abdominal thrust (also referred to as the Heimlich maneuver) is one method used to force obstructions from a patient's airway that cannot be removed with a finger sweep.

Abdominal thrusts force air out of the lungs, expelling the obstruction, and clearing the patient's airway.

110  **OBSTRUCTED AIRWAY  
ADULT & CHILD**

111  **CONSCIOUS CHOKING  
ADULT & CHILD**

112  **UNCONSCIOUS CHOKING  
ADULT & CHILD**

113  **WARNING!!**

NOTE: Abdominal thrusts *should not* be used on infants or pregnant women. Also, they may not be effective on adults who are obese.

NOTE: Prior to each ventilation, look in mouth for obstruction.

114  **CHEST THRUSTS**

The chest thrust is another maneuver that can be used to force obstructions from a patient's airway.

Chest thrusts are used in place of abdominal thrusts when the patient:

- ▶ Is in late stages of pregnancy
- ▶ Has abdominal injuries
- ▶ Is too obese for abdominal thrusts to be effective

115  **CHEST THRUSTS**

116  **CHEST THRUSTS (cont'd)**

117  **OBSTRUCTED AIRWAY  
INFANTS**

A combination of back blows and chest compressions may be used to clear a foreign body from an infant's airway. The following is the technique for chest thrusts on both conscious and unconscious infants:

NOTE: For the purposes of this course, an *infant* is newborn to one year.

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122  **Infant – Obstructed Airway**

123  **THINGS TO REMEMBER**

Do not perform blind finger sweeps in infants and children because sweeps may push the foreign body back into the airway, causing further obstruction or injury.

If the infant patient becomes unresponsive, stop giving back slaps and begin CPR.

Repeat steps 3 through 5 until obstruction is cleared.

124  **Practical Exercise – Chest Thrusts**

125  **Bleeding Control**

126  **BLEEDING CONTROL**

Large or deep wounds or injuries can lead to uncontrolled bleeding, which in turn can lead to shock and eventually death.

CIRCULATORY SYSTEM

The three components to the human circulatory system:

- ▶ heart
- ▶ blood vessels
- ▶ blood

If any one component does not function properly, oxygen and nutrients will not reach the body's major organs in sufficient enough supply to support life.

127  **BLEEDING CONTROL TECHNIQUES**

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131  **BLEEDING CONTROL**

A dressing is any material applied to a wound to control bleeding and prevent contamination. A bandage is any material used to hold a dressing in place.

NOTE: Direct pressure and/or tourniquet should be used as the primary bleeding control technique; however, peace officers and other first responders may use elevation or pressure points.

132  **BLEEDING CONTROL**

There are four techniques that may be used to control or limit bleeding at the scene of a medical emergency:

1. Direct Pressure
2. Elevation
3. Pressure Points (Pressure Bandage)
4. Tourniquets (last resort)

133  **Tourniquet**

134  **Tourniquet**

135  **Wound Care – Israeli Bandage**

136  **Wound Care Israeli Bandage 2**

137  **Wound Care – Packing Wound**

138  **Wound Care – Applying Occlusive**

139  **Wound Care**

140  **Wound Care – Combat Gauze**

141  **OPEN WOUNDS**

An open wound is any injury where the skin has been broken, exposing the tissue underneath. Abrasions, incisions, lacerations, punctures, avulsions, and amputations are all examples of open wounds requiring attention to control bleeding.

The following table identifies types of open wounds:

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146  **CARE FOR OPEN WOUNDS**

Care of open wounds will require an initial assessment and then action to stop bleeding and prevention of shock.

The following table identifies the appropriate steps to be taken when caring for open wounds:

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150  **Sprains and Fractures – Splinting**

151  **Dislocations**

152  **IMPALED OBJECTS**

153  **IMPALED OBJECTS**

Unlike treatment for other situations involving impaled objects, any object (knives, arrows, screw drivers, etc.) that is impaled into a patient's cheek or face and causes an airway obstruction should be removed. If the impaled object is

obstructing the patient's airway:

- ▶ If there is no airway obstruction, *do not* attempt to remove the object
- ▶ Carefully pull the object out from the direction it entered
- ▶ Place dressings on both the inside and outside of the cheek to control bleeding

If the object resists coming out, *stop. Do not pull any farther.* Place a protective device around it to stabilize the object (paper cup) and secure the device with a bandage.

#### 154 **NOSEBLEEDS**

patients with facial injuries may experience an accompanying nosebleed. If this occurs and no spinal injury is suspected, have the patient:

- ▶ Assume a seated position
- ▶ Lean slightly forward
- ▶ Pinch the nose midway at the point where bone and cartilage meet
- ▶ Maintain the position until bleeding stops

If the patient is unconscious:

- ▶ Place the patient in the recovery position, if appropriate
- ▶ Maintain an open airway

NOTE: *Do not* pack the patient's nostrils. This could cause blood to back up and create an obstructed airway.

#### 155 **CHEST AND ABDOMINAL INJURIES**

Traumatic injuries to the chest or abdomen are potentially serious because of possible damage to the lungs and vital organs.

Traumatic injury to the chest and/or abdomen can lead to bleeding (external and internal) as well as damage to the lungs, heart, and other vital organs.

The chest and/or abdomen may be injured in a number of ways. Three of the most common are identified in the following table:

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#### 157 **CLOSED CHEST WOUNDS**

Although there may not appear to be any serious injury to the chest, blunt trauma or compression to the chest area can lead to a condition referred to as flail chest.

Flail chest is the condition where the ribs and/or sternum are fractured in such a way that a segment of the chest wall does not move with the rest of chest wall during respiration. It is caused when two or more ribs next to each other are broken.

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159  **OPEN CHEST WOUNDS**

160  **OPEN CHEST WOUND**

All open wounds to the chest should be considered life-threatening.

For respiration to take place properly, the chest must function as a vacuum. With an open chest wound, air may enter the chest area causing a lung to collapse (e.g., sucking chest wound with a punctured lung). Under such conditions, the patient's ability to breathe, and the patient's heart function can be greatly impaired.

To prevent air from entering the chest cavity, an occlusive dressing should be applied to the wound as quickly as possible.

161  **OCCLUSIVE DRESSING**

An occlusive dressing:

- ▶ is a nonporous dressing (e.g., plastic bag)
- ▶ used to cover the wound
- ▶ creates an air-tight seal

NOTE: As the patient inhales, the dressing is sucked tight to the skin, providing a seal over the wound. If the dressing is placed properly, respiration should partially stabilize.

162  **APPLYING AN OCCLUSIVE DRESSING**

The following table identifies a technique that can be used to apply an occlusive dressing to an open chest wound:

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164  **ENTRY AND EXIT WOUNDS**

If the chest has both entrance and exit wounds, occlusive (airtight) dressings should be placed on both wounds. The physically higher wound should be vented.

165  **CLOSED ABDOMINAL WOUND**

A patient with a closed abdominal wound will have no external bleeding, but may have *internal bleeding* that can be severe and potentially life-threatening.

166  **Paradoxical Respiration**

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168  **OPEN ABDOMINAL WOUND**

An open abdominal wound can be caused by lacerations and punctures to the abdomen.

Blood loss and the potential for infection should be of concern when dealing with an open wound to the abdomen.

If an open abdominal wound is identified, peace officers should initiate the following first aid measures.

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170  **OPEN ABDOMINAL WOUND**

171  **PROTRUDING ORGANS**

If any organs or portion of an organ protrude from the abdominal wound, *do not* attempt to touch, move, or replace them. Cover the organ and the rest of the wound with a moist dressing and seal with an occlusive dressing.

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173  **Bleeding Control – Practical Exercise**

- ▶ Direct Pressure
- ▶ Pressure Bandage
- ▶ Tourniquet Device
- ▶ Wound Packing
- ▶ Exposed Fracture
- ▶ Splinting

174  **Narcan**

175  **Shock**

176  **SHOCK**

*Shock is a life-threatening condition. If not immediately cared for, the patient can die.* Perfusion is the continued flow of blood through the capillaries supplying the body's tissues and organs with oxygen and removing waste products. Inadequate perfusion lead to shock.

177  **INDICATORS OF SHOCK**

178  **INDICATORS OF SHOCK**

179  **SEVERITY OF INJURY**

There may be no relationship between severity of an injury and the onset of shock. patients may appear to have no major injury but still show signs of restlessness or anxiety, which are early stages of shock.

For this reason, *all patients of traumatic or medical emergencies* should be provided care for shock from the time of initial contact.

NOTE: Injuries that might appear be minor (e.g., dislocated finger) or the absence of obvious internal injury, can cause a person to go into irreversible shock causing death.

180  **FAINTING**

Fainting is a form of shock characterized by sudden unconsciousness. It is caused by dilation of blood vessels resulting in reduced flow of oxygenated blood to the brain.

181  **TREATING SHOCK**

*All patients should be treated for shock* even if no indications of shock are evident. When providing care to treat shock, officers acting as first responders should:

- ▶ Control all external bleeding and treat other injuries
- ▶ Place the patient in appropriate position
- ▶ Be alert for vomiting
- ▶ Maintain the patient's body temperature but avoid overheating
- ▶ Place the patient in a position to help maintain blood flow
- ▶ Reassure the patient
- ▶ Continue to monitor the patient's ABCs and be prepared to take action if necessary (rescue breathing, CPR)

182  **THIRST**

Even though the patient may be thirsty, *do not give anything to drink*. Shock can cause the gastrointestinal system to shut down. Fluids given orally may lead to vomiting.

183  **PATIENT POSITIONING**

During treatment for shock, the position in which the patient is placed is dependent upon the nature of the injury or illness. The following identifies the positions commonly used:

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186  **SHOCK**

There are numerous possible indicators that a patient might be going into shock.

- ▶ Confusion, anxiety, restlessness, combativeness, sudden unconsciousness
- ▶ Pale, cool, moist skin, profuse sweating; thirst, nausea, vomiting; cyanosis; dull eyes, dilate pupils
- ▶ Rapid, weak pulse; abnormal respiration rate; shallow, labored breaths

All patients should be treated for shock even if no indications of shock are evident.

187  **TRAUMATIC INJURIES**

Peace officers are often first to respond to the scene of a traumatic incident. They must be capable of activating the EMS system, and providing appropriate first aid to patients of traumatic injuries.

Any person who has suffered a traumatic injury may also be subject to a possible brain or spinal cord injury. For this reason, peace officers, acting as first responders, should treat all traumatic injury patients as if they have a head injury.

188  **HEAD INJURIES**

189  **INDICATIONS OF HEAD INJURY**

Head injuries can involve injuries to the skull, scalp, brain, blood vessels and fluid around the brain, and/or neck. They may vary from those involving minor bleeding to those leading to life-threatening conditions and spinal cord injury.

The following are general signs and symptoms of a possible head injury:

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192  **HEAD INJURIES**

The extent of a head injury may not always be obvious. Whenever a patient has suffered a traumatic head or neck injury, brain and spinal cord damage should always be assumed.

First aid measures are noted in the following table:

193  **HEAD INJURIES**

194  **HEAD INJURIES - TREATMENT**

195  **CARDIAC EMERGENCIES**

A cardiac emergency can range from a patient experiencing shortness of breath or palpitations to full cardiac arrest. Swift action is necessary on the part of peace officers to prevent death or permanent neurological injury.

196  **CARDIAC EMERGENCIES**

Heart attack is a common term describing minor to severe conditions. Minor conditions

include blockage of blood or lack of oxygen to heart tissue, with varying levels of pain. If the patient does not receive appropriate care immediately, the patient's chances of survival are greatly reduced.

197  **CARDIAC EMERGENCIES**

Coronary artery disease (CAD) (often referred to as coronary heart disease) is a disease where fatty deposits build up in the walls of the arteries that feed the heart's muscle. If an artery becomes blocked, the heart muscle will be deprived of blood and oxygen.

198  **OTHER CAUSES OF CARDIAC EMERGENCIES**

Along with coronary heart disease, there are a number of other conditions that can lead to cardiac emergencies. Cardiac arrest may also be caused by:

- ▶ Drowning
- ▶ Electrocution
- ▶ Suffocation
- ▶ Choking
- ▶ Drug overdose
- ▶ Allergic reaction

199  **INDICATORS**

The following table identifies the most common indicators of a cardiac emergency:

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201  **FIRST AID MEASURES**

Although the indicators of a cardiac emergency resemble the indicators of a number of other medical conditions (e.g., heartburn), peace officers should always *first assume that a cardiac emergency exists*, activate the EMS system (if not already activated), and take appropriate first aid measures.

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203  **MEDICATIONS**

Some patients with existing cardiac conditions may be taking prescription medications for that condition. Officers should *never administer* any medications, prescribed or otherwise.

If patients are oriented enough to ask for or decide they need their prescribed medication, peace officers may *allow* a patient to take them. Officers may assist the patient if required (i.e., removing medication from its container and placing it in the patient's hand).

204  **RESPIRATORY EMERGENCIES**

Respiratory emergencies may range from patients who are having breathing difficulty, but nevertheless are breathing adequately, to patients who are not able to breathe at a level that will sustain life.

205 

206  **CAUSES OF INADEQUATE BREATHING**

There are numerous possible causes that could lead to inadequate breathing and potential respiratory arrest (when breathing stops completely), including:

- ▶ Existing illness (e.g., emphysema, asthma)
- ▶ Allergic reaction (causing swelling of the throat)
- ▶ Cardiac emergency
- ▶ Drowning
- ▶ Suffocation
- ▶ Obstructed airway
- ▶ Body positioning that restricts breathing (i.e., *positional asphyxia*)
- ▶ Drug overdose
- ▶ Hyperventilation

207 

208  **FIRST AID MEASURES**

If a peace officer suspects that a patient is experiencing a *respiratory emergency*, the officer should *activate the EMS system* (if not already activated) and take appropriate first aid measures.

209 

210 

211  **How to Deliver a Baby**

For Police

212  **BURNS**

A burn is an injury caused by heat, chemicals, or electricity. Burns can involve just the outermost layer of the skin or go deeper into structures below the skin including muscle, bone, nerves, and blood vessels. Along with physical damage, patients with burns can also experience great pain and emotional trauma from the injury.

213  **PATIENT ASSESSMENT**

Prior to any first aid measures, no matter how extreme the burn, a patient assessment including initial and focused surveys should be conducted.

Only when immediate life-threatening conditions have been addressed, should the officer's attention be directed to first aid treatment for the burns themselves.

Burns to the face, nose and mouth may be life threatening due to respiratory distress.

214  **BURN SEVERITY**

Burns involving the skin are classified according to the depth of the burn in the tissue. Classifications include first-degree burns, second-degree burns, third-degree burns, and fourth-degree burns. The following table presents information regarding each:

215

216

217  **BURNS**

218  **TYPES OF BURNS**

The most common types of burns are thermal burns, chemical burns, and electrical burns. The following table provides a description along with appropriate first aid measures for each:

219

220

221  **NOTE**

Bandage should hold dressing in place and protect the area from contaminants.

Bandaging too tightly may not only cause pain but also restrict swelling.

222 

223  **NOTE**

Entrance and exit wounds caused by electrical current may be difficult to see initially. They will be found in different locations on the patient's body. For example, if the patient touches a live wire, current may enter the body through the hand, pass through the body, and exit through the patient's feet.

224 

225  **NOTE**

If symptoms occur during or after medical radiation treatments, notify physician or seek medical treatment.

Handle affected areas gently. Treat symptoms or illnesses as advised by physician.

226  **ELECTRICAL CURRENT AND VEHICLES**

If officers respond to calls where live power lines have fallen onto a vehicle, they should:

- ▶ *Not* touch the lines or any part of the vehicle
- ▶ Instruct the occupants to remain in the vehicle
- ▶ Wait for the utility company to turn off the power before taking any action
- ▶ Occupants should *not* be told to leave the vehicle unless life-threatening circumstances exist (e.g., vehicle fire).

227  **Epipen**