

Stand Alone 6 – First Aid
Session 11 – Traumatic Injuries
LD 34 – First Aid

Date Revised: 11/19/19

Course Goal: To teach recruit officers how to provide first aid and CPR. Utilize CAPRA.

Session Goal: To teach recruit officers the knowledge and skills necessary to provide appropriate first aid for traumatic injuries.

Learning Objectives:

- Recognize indicators of a possible head injury [34.IV.A]
- Recognize the appropriate first aid measures for treating facial injuries to include: [34.IV.B]
 - Objects in the eye [34.IV.B.1]
 - Chemicals in the eye [34.IV.B.2]
 - Dental emergency [34.IV.B.3]
 - Nose bleed [34.IV.B.4]
- Recognize appropriate first aid measures for treating open and closed injuries to the: [34.IV.C]
 - Chest [34.IV.C.1]
 - Chest seals and dressings [34.IV.C.1.a]
 - Abdomen [34.IV.C.2]
- Recognize appropriate first aid measures for internal bleeding [34.IV.D]
- Identify appropriate first aid measures for treating injuries or wounds to the bones, muscles, soft tissues, or joints [34.IV.E]
- Recognize appropriate first aid measures for treating injuries to the head, neck, and back including: [34.IV.F]
 - Spinal immobilization [34.IV.F.1]
- Recognize appropriate first aid measures for treating: [34.IV.G]
 - Thermal burns [34.IV.G.1]
 - Chemical burns [34.IV.G.2]
 - Electrical burns [34.IV.G.3]
 - Radiation burns [34.IV.G.4]

Session Time: 2 hours

Resources:

- Classroom with tables
- White board
- Dry-erase markers
- Video case study – Flail Chest
- Video case study – Sucking Chest Wound

Session Summary: The instructor will lead an overhead facilitated discussion with the students.

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Outline	Instructor Notes
<p>I. Traumatic Injuries</p> <p>A. Head injuries [1]</p> <p>1. Indications of head injury [34.IV.A]</p> <p>a. Mechanism of injury</p> <ol style="list-style-type: none"> 1) Striking a vehicle’s windshield or dashboard 2) Blow to the head 3) Falls <p>b. Mental status [2]</p> <ol style="list-style-type: none"> 1) Agitated or confused 2) Combative or appears intoxicated 3) Decreased level of consciousness 4) Loss of short term memory 5) Loss of consciousness <p>c. Vital signs</p> <ol style="list-style-type: none"> 1) Abnormal breathing patterns 2) Decreased pulse 3) General deterioration of vital signs <p>d. Visible injury</p> <ol style="list-style-type: none"> 1) Deformity of head/skull 2) Visible bone fragments <p>e. Appearance</p> <ol style="list-style-type: none"> 1) Clear or bloody fluid from ears and/or nose 2) Unequal pupils 3) Bruises behind ears 4) Discoloration around eyes 5) Paralysis 6) Priapism <p>f. Other</p> <ol style="list-style-type: none"> 1) Blurred vision 2) Projectile vomiting <p>2. First aid measures [3] [34.IV.B]</p> <p>a. Position</p> <ol style="list-style-type: none"> 1) Do not move victim’s head or neck 2) Have the victim remain in the position they were found in <p>b. Assessment</p> <ol style="list-style-type: none"> 1) Determine level consciousness 2) Conduct a primary and secondary survey 3) Jaw-thrust to open the airway <p>c. Treatment</p> <ol style="list-style-type: none"> 1) Activate EMS 2) Control bleeding 3) Be alert for cerebrospinal fluid <ol style="list-style-type: none"> a) Bandage loosely b) Do not restrict flow 	<p>[1] Ask – What are some important factors to consider when dealing with victims of a head injury?</p> <p>[2] Ask – What symptoms might be indicative of a serious head injury?</p> <p>[3] Ask – what first aid measures should a police officer take to treat a victim of a facial injury?</p>

Stand Alone 6 – First Aid
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LD 34 – First Aid

<ul style="list-style-type: none">4) Do not apply direct pressure5) Be prepared for vomiting6) Treat for shock [34.III.N]7) Do not elevate the victim's legs8) Reassure the victim9) Continue to monitor the victim <p>3. Impaled objects [4]</p> <ul style="list-style-type: none">a. If there is no airway obstruction, do not removeb. If the airway is obstructed:<ul style="list-style-type: none">1) Carefully pull the object out from the direction it entered<ul style="list-style-type: none">a) If the object resists, stop pullingb) Place a protective device around it to stabilize the objectc) Secure with a bandage2) Place dressings to control bleeding <p>B. Facial injuries [5] [34.IV.B]</p> <ul style="list-style-type: none">1. Objects in the eye [34.IV.B.1]<ul style="list-style-type: none">a. Impaled objects in the eye should not be removedb. Cover affected eye with a protective device, like a small paper cupc. Bandage both eyes shutd. Do not apply direct pressuree. Do not remove any impaled objectf. Reassure the victim2. Chemicals in the eye [34.IV.B.2]<ul style="list-style-type: none">a. If both eyes are affected, treat victim with their face and eyes pointed down.b. If only one eye is affected, lay victim on their side, and treat the eye closest to the ground.c. If a dry chemical, brush away chemical prior to flushing with water, if a liquid, begin flushing immediatelyd. Flush from the inside of eye out to avoid cross contamination, starting from the bridge of the nosee. Have victim remove contact lensesf. Do not rub the eye or allow victim to rub the eyeg. If possible, identify the chemical and contact poison control3. Dental emergencies[6][34.IV.B3]<ul style="list-style-type: none">a. Activate EMSb. Ensure that the airway is clear and unobstructed	<p>[4] Ask – What is the main consideration when dealing with an impaled object?</p> <p>[5] Ask – What is the main consideration when dealing with objects in the eye?</p> <p>[6] Ask – What is the main consideration when dealing with injuries involving the mouth?</p>
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<p>b. Sucking chest wound [9.2]</p> <ol style="list-style-type: none"> 1) Punctured lung 2) Breathing and heart function impaired <p>4. Chest seals/occlusive dressing [10] [34.IV.C.1.a]</p> <p>a. Definition</p> <ol style="list-style-type: none"> 1) Nonporous dressing 2) Used to cover the wound 3) Creates and air tight seal <p>b. Application [11] [11.1]</p> <ol style="list-style-type: none"> 1) Place a gloved hand over the wound 2) Wipe excess bleeding/fluids from the wound site. 3) The dressing should be at least two inches wider than the wound itself 4) Upon exhalation apply the chest seal directly over the wound 5) Treat for shock 6) Continue to monitor the victim 7) If indications of increased respiratory distress are present, peel up one edge of the seal to “burp” the seal and immediately reapply (tension pneumothorax) 8) If the chest has both entrance and exit wounds, occlusive dressings should be placed on both wounds. The physically higher wound should be vented <p>D. Abdominal injuries [34.IV.C.2]</p> <ol style="list-style-type: none"> 1. Closed abdominal wound and internal bleeding [12] <p>a. Indicators [13]</p> <ol style="list-style-type: none"> 1) Victim found in fetal position 2) Rapid, shallow breathing 3) Rapid pulse 4) Rigid or tender abdomen 5) Pain to touch <p>b. First aid measures for internal bleeding [34.IV.D]</p> <ol style="list-style-type: none"> 1) Activate EMS 2) Place in comfortable position 3) Treat for shock 4) Continue to monitor the victim 5) Be prepare for vomiting 2. Open abdominal wounds [14] <p>a. Assessment</p> <ol style="list-style-type: none"> 1) Determine consciousness 2) Conduct primary and secondary surveys <p>b. Treatment</p> <ol style="list-style-type: none"> 1) Activate EMS 	<p>[10] Ask – What is an occlusive dressing?</p> <p>[11] Ask – Why is it important to apply an occlusive dressing to an open chest wound?</p> <p>[11.1] Describe – how an occlusive dressing should be applied.</p> <p>[12] Ask – What type of trauma should cause a police officer to suspect a closed abdominal wound? Seeking:</p> <ul style="list-style-type: none"> • Blunt force trauma <p>[13] Ask – What is the main concern when dealing with a closed abdominal wound? Seeking:</p> <ul style="list-style-type: none"> • Internal bleeding <p>[14] Ask – What first aid measures should a police officer take to treat an open abdominal wound?</p>
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Stand Alone 6 – First Aid
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LD 34 – First Aid

<ul style="list-style-type: none"> 2) Place the victim in a supine position with the knees up 3) Apply a sterile dressing to control bleeding 4) Treat for shock 5) Continue to monitor the victim <p>3. Protruding organs [15]</p> <ul style="list-style-type: none"> a. Assessment <ul style="list-style-type: none"> 1) Determine consciousness 2) Conduct primary and secondary surveys b. Treatment <ul style="list-style-type: none"> 1) Activate EMS 2) Place the victim in a supine position with the knees up 3) Cover with a moist, sterile dressing 4) Seal with airtight bandage 5) Treat for shock 6) Continue to monitor the victim <p>E. Bone, joint, and muscle injuries [16] [34.IV.E]</p> <ul style="list-style-type: none"> 1. Musculo-skeletal system <ul style="list-style-type: none"> a. Bone b. Joint c. Skeletal muscle d. Cartilage e. Tendon f. Ligament 2. Musculo-skeletal injuries [17] <ul style="list-style-type: none"> a. Direct b. Indirect c. Twisting 3. Types of injuries [18] <ul style="list-style-type: none"> a. Fractures b. Dislocations c. Sprains d. Strains 4. First aid measures [19] <ul style="list-style-type: none"> a. Assessment <ul style="list-style-type: none"> 1) Conduct a primary and secondary survey 2) Determine if there are any life-threatening injuries b. Treatment <ul style="list-style-type: none"> 1) Activate EMS 2) Do not manipulate the injury 3) Expose the area 4) Control bleeding 5) Stabilize above and below the joint 6) Check capillary refill 7) Treat for shock 	<p>[15] Ask – How would the first aid measures change if there are protruding organs?</p> <p>[16] Ask – What are the components of the musculo-skeletal system?</p> <p>[17] Ask – Describe the ways bone, joint and muscle Injuries be “traumatic”?</p> <p>[18] Ask – What are the most common injuries to the musculo-skeletal system?</p> <p>[19] Ask – What first aid measure should a police officer take for a musculo-skeletal injury?</p> <p>[20] Ask – What extra first aid measures are required for a suspected spinal injury?</p>
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<p>8) Do not elevate the legs</p> <p>c. Treatment considerations for spinal injuries [20] [34.IV.F]</p> <p>1) Spinal immobilization prevents further damage to spinal cord for head, neck and back injuries, by preventing the victim's head and neck from moving</p> <p>2) Spinal immobilization technique [34.IV.F.1]</p> <p>a) Have victim lay down</p> <p>b) Use your forearms to act as brace along the sides of the victim's head</p> <p>c) Hold onto the victim's trapezius muscles to anchor your arms to their upper body</p> <p>d) Do not let the victim's head or neck move</p> <p>F. Burns [7] [34.IV.G]</p> <p>1. Assessment [21]</p> <p>a. Conduct a primary and secondary survey</p> <p>b. Determine if there are any life-threatening injuries</p> <p>2. Severity [22]</p> <p>a. First degree</p> <p>1) Damage to the epidermis only</p> <p>2) Skin appears red</p> <p>3) Can be very painful</p> <p>b. Second degree</p> <p>1) Damage to the epidermis and dermis</p> <p>2) Skin appears red and mottled</p> <p>3) Accompanied by blisters</p> <p>4) Causes intense pain</p> <p>c. Third degree [23]</p> <p>1) Damage to the epidermis, dermis, and into the fatty layer and muscle</p> <p>2) Most serious of all burns</p> <p>3) Skin appears dry, leathery, and discolored</p> <p>4) May be painful or may not if nerve endings are destroyed [24]</p> <p>3. Thermal burns [25] [34.IV.G.1]</p> <p>a. Description</p> <p>1) Caused by direct heat</p> <p>2) Hot liquids</p> <p>3) Hot objects</p> <p>b. First aid measures [26]</p> <p>1) Activate EMS</p> <p>2) Remove victim from source of heat</p> <p>3) Cool the burned area with cool water</p>	<p>[21] Ask – What is the priority when encountering a burn victim? Seeking:</p> <ul style="list-style-type: none"> • Treating other life threatening conditions, if present <p>[22] Ask – Describe how burns are classified</p> <p>[23] Ask – Which burn classification is the most serious?</p> <p>[24] Ask – Discuss the different ways a victim can receive a first, second or third degree burns.</p> <p>[25] Ask – What is a thermal burn?</p> <p>[26] Ask – How do you treat a thermal burn?</p> <p>Ask – How can officers prepare while enroute to a traumatic injury medical aid call?</p>
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<ul style="list-style-type: none">4) Apply a dry sterile dressing and bandage loosely5) Treat for shock6) Monitor victim <p>4. Chemical burns [27] [34.IV.G.2]</p> <ul style="list-style-type: none">a. Description<ul style="list-style-type: none">1) Caused by acids or alkalis2) Most frequent in industrial settingsb. First aid measures [28]<ul style="list-style-type: none">1) Activate EMS2) Wear PPE's3) If the chemical is a dry powder:<ul style="list-style-type: none">a) Brush away as much as possibleb) Flush with water4) Remove excess chemical, exposed clothing, or jewelry prior to flushing5) Flush with water for 15-30 minutes6) Cover burn with dry sterile dressing7) Treat for shock8) Monitor victim <p>5. Electrical burns [29] [34.IV.G.3]</p> <ul style="list-style-type: none">a. Description<ul style="list-style-type: none">1) The body becomes a conduit for electrical current2) May cause extensive internal injuriesb. First aid measures [30]<ul style="list-style-type: none">1) Ensure the scene is safe2) Do not touch the victim until the source of the current has been turned off3) If necessary, begin CPR immediately4) Examine the victim for external wounds5) Treat all wounds the same as with thermal burns6) Treat for shock7) Monitor victimc. Electrical current and vehicles<ul style="list-style-type: none">1) Do not touch the lines or any part of the vehicle2) Instruct the occupants to remain in the vehicle3) Wait for the utility company to turn off the power before taking any action4) Occupants should not be told to leave the vehicle unless life-threatening circumstances exist <p>6. Radiation burns [31] [34.IV.E.4]</p> <ul style="list-style-type: none">a. Description	<p>[27] Ask – What is a chemical burn?</p> <p>[28] Ask – How do you treat a chemical burn?</p> <p>[29] Ask – What is an electrical burn?</p> <p>[30] Ask – How do you treat an electrical burn?</p> <p>[31] Ask – What is a radiation burn?</p>
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Stand Alone 6 – First Aid
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LD 34 – First Aid

<ul style="list-style-type: none">1) Occurs when the body is exposed to radiation2) Either a single large dose or chronicallyb. First aid measures [32]<ul style="list-style-type: none">1) Activate EMS2) Evacuate the area of exposure3) Remove exposed clothing4) Wash body and hair thoroughly5) Dry and wrap affected areas with a towel or blanket6) Treat for shock7) Monitor victim7. Radiation sickness<ul style="list-style-type: none">a. Signs and symptoms<ul style="list-style-type: none">1) Nausea and vomiting2) Diarrhea3) Skin burns4) Weakness5) Fatigue6) Loss of appetite7) Fainting8) Dehydration9) Inflammation10) Bleeding from nose, mouth, gums, and rectum11) Low red blood cell count12) Hair lossb. Acute exposure<ul style="list-style-type: none">1) Large single dose of radiation2) Can cause rapid development of radiation sicknessc. Chronic exposure<ul style="list-style-type: none">1) Often produces effects that can be observed within weeks after the initial exposure2) May not show up until years laterd. Only provide medical care if you have appropriate PPE's	<p>[32] Ask – How do you treat a radiation burn?</p>
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