First Aid at Prescribed Burns

Presented by
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Likely Injuries on Prescribed Fires

- Dehydration/Heat Challenge
- Smoke Inhalation/CO Poisoning
- Cardiac Event
- Shock
- Motor Vehicle Accident or ATV Turnover
- Burns
- Minor Irritations
  - Sprained Ankles, Bee Stings,
  - Debris in the Eye, Bleeding Wounds
First Steps in an Emergency

- Ensure scene is safe before approaching victim!
- Identify and treat life-threatening emergencies first
- Decide whether additional resources will be needed
- Check for other injuries and prioritize care
- Continue to monitor victim
Life Threatening Conditions

- Unconscious
- Not Breathing
- Difficulty Breathing
- No pulse
- Severe Bleeding
- Signs of Shock
- Late-stage Heat Challenge ("Heat Stroke")
- Bee-Sting in known allergic victim
Checking for Further Injury

• First, do no further harm!
• Observe: area around victim
  position of victim
• Get consent if victim is conscious
• Perform physical exam
• Record Vital Signs
• Obtain SAMPLE History
Vital Signs

- Pulse
- Breathing
- Skin Color and Temperature
- Pupil Reactions
- Level of Consciousness (LOC)
- Sensation
- Ability to move
SAMPLE History

- **Signs and Symptoms**
- **Allergies**
- **Medications**
- **Pertinent past history**
- **Last food or fluid intake**
- **Events leading up to the accident**
Dehydration/Heat Challenge

Dehydration

↓

Heat Cramps

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Heat Exhaustion

↓

Heat Stroke
# Dehydration/Heat Cramps

<table>
<thead>
<tr>
<th>Signs/Symptoms</th>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Headache</td>
<td>• PREVENTION!!</td>
</tr>
<tr>
<td>• Fatigue</td>
<td>• Fluids</td>
</tr>
<tr>
<td>• Dizziness</td>
<td>• Rest in shade or A/C</td>
</tr>
<tr>
<td>• Fainting</td>
<td>• Recovery is normally</td>
</tr>
<tr>
<td>• Cramping of large skeletal muscles (usually legs</td>
<td>fairly quick</td>
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<tr>
<td>or abdomen)</td>
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</tbody>
</table>
Heat Exhaustion

**Signs/Symptoms**

- Excessive sweating
- Skin cool, moist, pale (though red at first)
- Headache worsens
- Dizziness, general weakness
- Fatigue, exhaustion
- Thirst, nausea

**First Aid**

- Remove to cooler environment (shade, A/C)
- Cool water in small sips
- Full recovery may take up to 24 hours
Heat Stroke

Signs/Symptoms

• Elevated body temp (as high as 106°)
• Hot, red skin (early on, may still be cool and/or pale)
• Sweating stops (early on, may still be moist)
• Deteriorating LOC
• Projectile vomiting
• Unconsciousness

First Aid

This is an immediately life threatening emergency!

• Reduce body temp:
  – dampen and fan skin (watch for shivering)
  – cold packs at armpits and groin
  – small sips of water if pt. conscious enough to protect own airway

• Evacuate to ambulance or hospital by stretcher.
Smoke Inhalation/CO Poisoning

Smoke inhalation is the leading cause of fire-related death.

CO poisoning is the leading cause of death in cases of smoke inhalation.
Smoke Inhalation

**Signs/Symptoms**
- Cough, hoarseness
- SOB
- Increased resp rate
- Eyes red & irritated
- Nostrils &/or nasal passages swollen
- Increased mucous production

**First Aid**
- Remove from smoky environment
- Humidified air
- $O^2$ therapy if available
Carbon Monoxide Poisoning

**Signs/Symptoms**
- Increased respiratory rate
- Headache, Fatigue
- Nausea, vomiting
- Fatigue

**Later Stages:**
- Decreasing LOC (agitation, impaired judgment, confusion)
- Chest Pain (esp. in those w/ compromised cardiac health)

**First Aid**
- **CALL 911**
- High dose, humidified O² therapy
Cardiac Emergencies

Angina

Cardiac Event

Heart Attack

Cardiac Arrest
# Cardiac Event/Heart Attack

<table>
<thead>
<tr>
<th>Signs/Symptoms</th>
<th>First Aid</th>
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<tbody>
<tr>
<td>Persistent chest pain</td>
<td>Stop activity</td>
</tr>
<tr>
<td>SOB</td>
<td>Rest in POC</td>
</tr>
<tr>
<td>Changes in heart rate</td>
<td>Call 911</td>
</tr>
<tr>
<td>Pale, cool, clammy</td>
<td>Assist pt. w/ any meds</td>
</tr>
<tr>
<td>Weakness or collapse</td>
<td>(e.g. nitroglycerin)</td>
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<tr>
<td></td>
<td>O² if available</td>
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<tr>
<td></td>
<td>Be prepared to do CPR</td>
</tr>
<tr>
<td></td>
<td>if cardiac arrest occurs</td>
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Shock

Shock is a **circulatory system challenge**, in which the body perceives a shortage of oxygenated blood reaching the vital organs.

The body begins a blood shift from the periphery to the core. Symptoms may mimic ASR (acute stress reaction), but shock is a life threatening emergency!

Can occur with severe bleeding, cardiac emergency, respiratory emergency, or other severe illness or injury.
Shock — Signs/Symptoms

Early Stages

• Pale, cool, clammy
• Restless, agitated
• Increased HR and respiratory rate
• Decreased B/P
• Nausea
• Thirst

Later Stages

• Lethargic, apathetic, unconscious
• Skin is gray, cool & damp
• Weak and irregular HR
• Very rapid & shallow respirations (very late stages – resp very slow)
• Eyes dull and dilated
Shock – First Aid

- Call 911!
- Treat the initial injury
- Support open airway, monitor continuously
- Lay down and elevate feet 12”
- Keep warm
- Nothing to drink
Shock in a Delayed Help Situation

• If patient will be able to get to a hospital within two hours, do not give food or fluids

• If longer, give sips of fluid at rate of no more than 4oz. (1/2 cup) to an adult over a 20-min period.

• Do not give fluids if unconscious, semi-conscious, or if there is a head or abdominal injury
MVA or ATV Turnover

Primary concern = Possible Head or Spinal Injury
Signs and Symptoms of Head and Spinal Injuries

- Trauma consistent with head/spinal injury
- Problems with breathing and vision
- Bilateral paralysis, numbness or tingling
- Ongoing headache, severe pain/pressure in the head, neck, back
- Nausea and vomiting
- Changes in level of consciousness
- Heavy external bleeding of the head, neck or back
- Bruises behind ears or under eyes
- Blood or other fluid from the ears or nose
- Unusual bumps or depressions on the head or over the spine
- Very slow pulse
- Pupils unequal size, respond unequally to light or moving objects
Spinal Injury – First Aid

• Assess the cause and seriousness
• Keep victim immobile!
• Monitor vital signs
• Evacuate professionally as soon as possible
Burns – First Aid

- Rescuer safety is primary concern!
- Assess severity: Depth of burn & Rule of Nines
- Remove jewelry
- Cool burn w/ cool water
- Do not use ice or icy-cold water
- Apply antibiotic ointment & dry, sterile dressing
- Watch for shock
- Replace lost fluids
Minor Irritations

Sprained Ankles $\rightarrow$ RICE

Bee Stings $\rightarrow$
- Remove stinger by scraping sideways
- Apply cold for swelling
- Watch for systemic reaction

Debris in Eye $\rightarrow$ Flush from nose out with affected eye down

Bleeding Wounds $\rightarrow$
- Control bleeding with direct pressure
- Apply antibiotic ointment and bandage
ANY OTHERS????