CAP Safety Briefing

Heat Safety

Presented by: 2LT. Paul Stansberry
Paul.Stansberry@EdmondCAP.org
Introduction

CAP performs many outdoor activities, several of which occur during the hottest months of the year. It’s critical that we are all aware of how we are affected by the heat, and how to avoid health and safety issues related to it.
Typical CAP outdoor activities

### Training –
- SAREX
- Encampment
- Unit ES training
- Physical Fitness testing

### Operational –
- Airshow support
- Disaster relief
- SAR

### Ceremonial –
- Color Guard performances
- Drill team performances
- Honor Guard performances
Heat facts

**Heat index**

- A measure of how hot it really feels when factoring in relative humidity.
- Devised for shady, light wind conditions. Full sunshine exposure can increase heat index values by up to 15 degrees.

### NOAA's National Weather Service

![Heat Index Chart](chart.png)

- **Relative Humidity (%)**
  - 40
  - 50
  - 60
  - 70
  - 80
  - 85
  - 90
  - 95
  - 100

- **Temperature (°F)**
  - 80
  - 82
  - 84
  - 86
  - 88
  - 90
  - 92
  - 94
  - 96
  - 98
  - 100
  - 102
  - 104
  - 106
  - 108
  - 110

- **Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity**
  - Caution
  - Extreme Caution
  - Danger
  - Extreme Danger
Heat facts

How fast can the sun heat up a car?

• Shortwave radiation (yellow lines) heat objects that it strikes, such as the dash in the car.
• Objects like the dash can easily reach temperatures of 180 – 200 degrees.
• Heated objects such as the dash then radiate heat (red lines) to the air and other objects in the car via convection.
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Common heat-related illnesses and how to address them

Sunburn facts

• Unprotected skin can burn in minutes if the UV index is high enough, and depending on your skin complexion.

http://1.usa.gov/1I36tCj

• One blistering sunburn in childhood more than doubles a person’s risk for developing melanoma later in life.

• Prevention is better than cure.
Common heat-related illnesses and how to address them

Sunburn treatment

- **Don’t get sunburned!** Apply sunscreen (at least SPF 15, but higher is better) regularly when the UV index is high and you’re exposed to the sun for an extended period of time.

- Get out of the sun quickly when you see signs of skin reddening.

- Use a cool cloth on sunburned areas, and/or take cool showers or baths.

- Apply lotion or gel that contain aloe vera to sunburned areas.

- Hydrate. Burns draw fluid to the skin surface and away from the rest of your body.

- Don’t wait to medicate. Ibuprofen will help to reduce swelling and ease discomfort.
Common heat-related illnesses and how to address them

Heat Cramp Symptoms

• Typically the first sign of other heat-related illnesses such as heat exhaustion or heat stroke.
• Painful muscle cramps and spasms, usually in the legs and abdomen.
• Heavy sweating.

Heat Cramp Treatment

• Apply firm pressure on cramping muscles, or gently massage to relieve spasms.
• Hydrate, unless nauseous.
• Seek professional help if symptoms do not improve.
Common heat-related illnesses and how to address them

<table>
<thead>
<tr>
<th>Heat Exhaustion Symptoms</th>
<th>Heat Exhaustion Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Heavy sweating</td>
<td>• Move affected person to a cooler environment, fan victim.</td>
</tr>
<tr>
<td>• Weakness</td>
<td>• Lay person down and loosen clothing.</td>
</tr>
<tr>
<td>• Cool, pale, clammy skin</td>
<td>• Apply cool, wet cloths to as much of the body as possible.</td>
</tr>
<tr>
<td>• Fast, weak pulse</td>
<td>• Hydrate.</td>
</tr>
<tr>
<td>• Muscle cramps</td>
<td>• If vomiting occurs more than once, seek immediate medical attention.</td>
</tr>
<tr>
<td>• Dizziness</td>
<td></td>
</tr>
<tr>
<td>• Nausea or vomiting</td>
<td></td>
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<tr>
<td>• Fainting</td>
<td></td>
</tr>
</tbody>
</table>
Common heat-related illnesses and how to address them

Heat Stroke

**Symptoms**

- Altered mental state.
- One or more of the following:
  - Throbbing headache
  - Confusion
  - Nausea
  - Dizziness
  - Shallow breathing
- Hot, red, dry or moist skin
- Rapid and strong pulse
- Faints or loses consciousness

**Treatment**

- Heat stroke is a severe medical emergency. Seek medical help immediately via 911 or emergency room.
- Move the victim to a cooler, preferably air-conditioned, environment.
- Reduce body temperature with cool cloths.
- Do NOT hydrate.
Common heat-related illnesses and how to address them

Spotting Dehydration:
- Dry mouth - If you’re thirsty, you’re already dehydrated.
- Infrequent urination
- Dry skin
- Constipation
- Dizziness
- Headache

The “Pee chart”
- Sounds gross. Works good.
Common heat-related illnesses and how to address them

Hydration guidelines:

• Before activity:
  • 1-2 hours before: 8 - 16 ounces of cold water.
  • 10 – 15 minutes before activity: 8 – 12 ounces of cold water.

• During activity:
  • ½ to 1 quart of cold water per hour.
    • Know your body. Use your own judgement. Be alert for symptoms of heat illness.
    • High electrolyte content Gatorade or other sports drink is an acceptable substitute
  • Not to exceed 12 quarts per 24 hour period.

• Post activity:
  • Aim to correct fluid lost during event.
  • Within 2 hours of event: 24 ounces of cold water
Resources & questions

• [http://hprc-online.org/nutrition/files/current-u-s-military-fluid-replacement](http://hprc-online.org/nutrition/files/current-u-s-military-fluid-replacement)