Treat Heat & Cold Injuries
Gain Attention

From the sub-zero temperatures where blood can freeze in the wounds to the punishing heat of Iraq and Afghanistan, U.S. Marines have fought to overcome some of the most severe climates in the world. If not for the shared knowledge of survival skills many more would have perished in such extreme climates.
OVERVIEW

Heat Injuries
  - Symptoms
  - Treatment
  - Preventive Measures

Cold Injuries
  - Symptoms
  - Treatment
  - Preventive Measures
LEARNING OBJECTIVES

Please Read Your

Terminal Learning Objectives

And

Enabling Learning Objectives
QUESTIONS
**HEAT INJURIES**

- **Heat injuries**: are injuries that result when a person is exposed in an environment of extreme heat. These injuries may occur even with proper planning and equipment. It is important that you recognize the symptoms and be able to take the proper actions to help a heat casualty.
HEAT INJURIES

- Three types of heat injuries:

**HEAT CRAMPS**
Heat cramps are muscular pains and spasms that usually occur in the legs or abdomen caused by exposure to high heat and humidity and loss of fluids and electrolytes. Heat cramps are often an early sign that the body is having trouble with the heat.

**HEAT EXHAUSTION**
Heat exhaustion typically involves the loss of bodily fluids through heavy sweating during strenuous exercise or physical labor in high heat and humidity.

**HEAT STROKE**
Heat stroke (also known as sunstroke) is a life-threatening condition in which a person’s temperature control system stops working and the body is unable to cool itself.

FIND OUT HOW TO TREAT THEM AT REDCROSS.ORG
HEAT CRAMPS

Muscles begin to cramp due to an imbalance of chemicals (Electrolytes) lost through excessive sweating.

Signs & Symptoms:

- Arm Cramps
- Legs or abdomen Cramps
- Excessive Sweating
HEAT INJURIES

HEAT CRAMPS: Treatment

• Move casualty to:
  - Shady area or improvise shade
  - Loosen the clothing, including boots
  - Have the casualty slowly drink at least one canteen full of water

• Seek medical aid should cramps continue and complete the Casualty Response Card
HEAT INJURIES

HEAT EXHAUSTION

• Caused by loss of water through sweating without adequate fluid replacement
HEAT INJURIES

HEAT EXHAUSTION – Symptoms

- Wet clammy/cool skin
- Headache & nausea
- Unsteady while standing
- Confusion
- Weakness or faintness
- Dizziness or drowsiness
HEAT EXHAUSTION: Treatment

- Move casualty to the shade
- Loosen or remove clothing & boots
- Pour water on casualty and fan
- Slowly drink water
- Elevate legs
- Rest

- Monitor the casualty until the symptoms are gone. If the symptoms persist, seek medical aid and complete the Casualty Response Card.
HEAT INJURIES

HEAT STROKE

- Is a **MEDICAL EMERGENCY**
- Can be fatal
- Caused when the body no longer is able to cool itself and the temperature continues to rise.
- Immediate action is required
HEAT INJURIES

HEAT STROKE - Symptoms

- Hot, red, dry skin
- Dizziness or confusion
- Headaches, seizures
- Nausea

- Respiration and pulse may be fast but weak
- Loss of consciousness
- Casualty may collapse suddenly
HEAT STROKE - Treatment
(Rapidly lower body temperature)

- Move to shade
- Remove or loosen clothing & boots
- Pour water on the casualty and fan
- Massage the skin
- Slowly drink water if conscious
- Seek medical aid immediately
- Complete “Casualty Response Card”
HEAT INJURIES

PREVENTIVE MEASURES

• Stay hydrated - drink water / sports drinks

• Consume a normal amount of salt.
  – Lightly salt your food
  – **Do not** take salt pills

• Acclimatization - the time it takes for your body to become familiar to new climate conditions
QUESTIONS
COLD INJURIES

• Cold injuries are climatic injuries that may result when:
  
  - Conditions are moderately to severely cold
  
  - Accompanied by wet or windy conditions
  
  - Duration of exposure
  
  - Inadequate protection is used
COLD INJURIES

TYPES OF COLD INJURIES

HYPOTHERMIA: Core body temperature drops too low
- Symptoms: Exhaustion, confusion, slurred speech, drowsiness

FROSTBITE: Skin loses blood circulation and freezes
- Symptoms: White or grayish-yellow skin area, skin that feels unusually firm or waxy, numbness

DEHYDRATION

- 100%
- 75%
- 50%
- 25%
COLD INJURIES

FROSTBITE

Body parts susceptible to frostbite:

- Cheeks
- Nose
- Ears
- Chin
- Forehead
- Wrists
- Hands
- Feet
COLD INJURIES

SUPERFICIAL FROSTBITE
SUPERFICIAL FROSTBITE

- Primarily involves the skin and the tissue just beneath the skin:

**Symptoms**

- White or yellowish at the site
- Redness of skin in surrounding area
- Affected area is numb
- Blistering and peeling may occur 12 to 36 hours after exposure
COLD INJURIES

DEEP FROSTBITE
COLD INJURIES

DEEP FROSTBITE

• Involves the freezing of tissue below the skin, and possible muscle and bone

Symptoms

– Painless, pale yellowish, waxy looking
– Swollen, or wooden to the touch
– Poor to no muscle movement
COLD INJURIES

FROSTBITE: Treatment

- **Face:** Cover with bare hands to warm
- **Hands:** Open the casualty’s jacket and shirt, place hands under the armpits. Close the shirt & jacket
- **Feet:** Remove boots and socks and place the feet under clothing

- Complete Casualty Response Card
- Transport casualty’s with deep frostbite as soon as possible
COLD INJURIES

FROSTBITE: Treatment

- **DO NOT** soak in cold water
- **DO NOT** attempt to thaw deep frostbite
- **DO NOT** warm by massage or open flame
- **DO NOT** use ointments or other medications
- **DO NOT** allow casualty to use alcohol or tobacco
Dehydration: is a lack of water in the body.

- Occurs very easily in cold climates
- Occurs when the body loses too much fluid, salt, and minerals
COLD INJURIES

DEHYDRATION: Symptoms

– Tongue, mouth, and throat become parched
– Swallowing becomes difficult
– Nausea
– Extreme dizziness and fainting
– Feeling tired or weak
– Muscle cramps
– Focusing becomes difficult
COLD INJURIES

DEHYDRATION: Treatment

– Keep casualty warm
– Loosen clothing to allow proper circulation
– Begin fluid replacement immediately
– Rest
– Complete Casualty Response Card
– Seek medical treatment
COLD INJURIES

HYPOTHERMIA

- Body’s core temperature falls to unsafe levels
- Can occur in above freezing temperatures due to water immersion, wet/cold, or windy conditions
- Physical exhaustion increases risk
- Insufficient diet increases risk
COLD INJURIES

HYPOTHERMIA: Symptoms

• Shivering (Body’s attempt to create heat)
• Drowsy or mentally slow
• Stiff uncoordinated movements
• Slurred speech
• Breathing is slow and shallow, pulse becomes weak or absent
• Unconsciousness
COLD INJURIES

HYPOTHERMIA: Treatment

- Prevent further heat loss
- Transport casualty immediately if able
- Move casualty to shelter
- Remove wet clothing
- Cover head & body with blankets, sleeping bag etc.
- Provide **warm** high-caloric or glucose (sugar) fluids
- Complete Casualty Response Card
COLD INJURIES

PREVENTIVE MEASURES

• Adequate nutrition (Hot meals – warm fluids)
• Wear cold weather clothing properly
• Never travel alone, inform others of travel plans
• Sufficient rest
• Avoid alcohol and dehydration
• Avoid tight fitting socks, and shoes
• Adequate shelter for periods of inactivity
QUESTIONS
SUMMARY

Heat Injuries
- Symptoms
- Treatment
- Preventive Measures

Cold Injuries
- Symptoms
- Treatment
- Preventive Measures
BACK UP SLIDE
Don’t get left out in the Cold.

!!! STUDY !!!