

# **FIRST AID/CPR**

## **Heat Emergencies**

Overview

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# FIRST AID/CPR

- Red Cross first aid/cpr courses available through the LSU (OES) Occupational and Environmental Safety Department- no charge for students and faculty
- 578-5640

# All Emergencies

- 1. CHECK**
- 2. CALL**
- 3. CARE**

# CHECK:

1. The scene for safety
2. The victim for consciousness

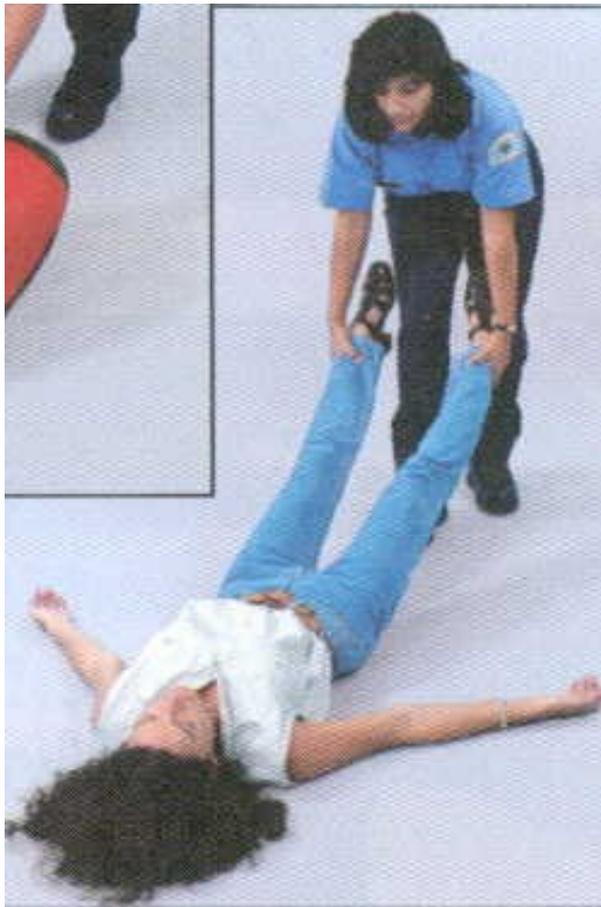
**DO NOT MOVE THE VICTIM unless:**

- 1) The scene becomes unsafe**
- 2) You have to reach another victim**
- 3) Proper care requires movement**

# CALL

- 1. CALL (or have someone call) 911 For Life Threatening Emergencies**
- 2. Give you name, location, nature of emergency.**

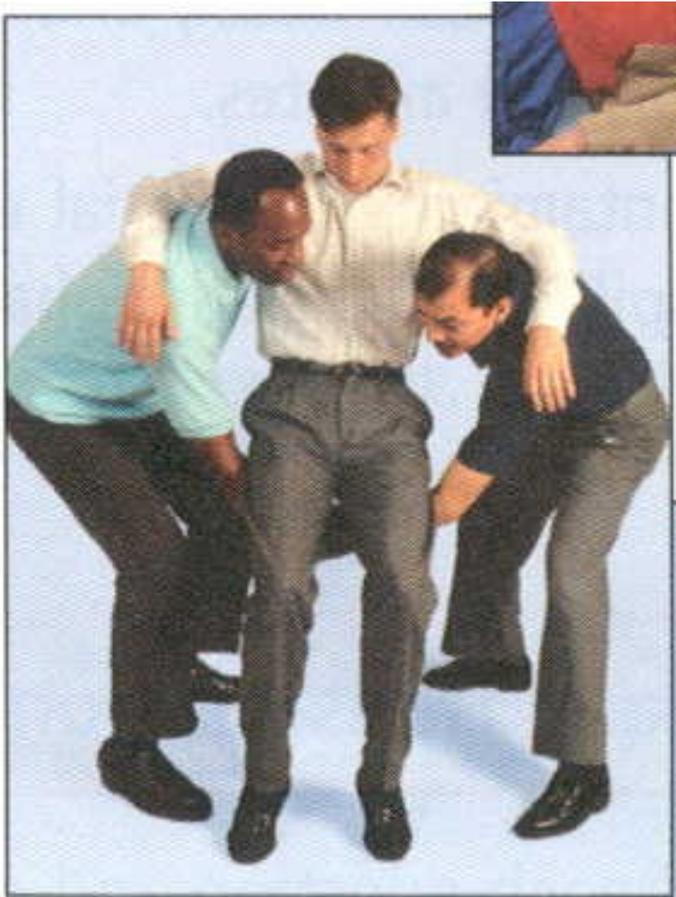
**\*\*Do NOT hang up. Let the emergency dispatcher ask all questions, let them hang up first.**



**Foot drag-** least desirable, no head support, arms catch on doorways

Move victim **ONLY** If:

- Scene becomes unsafe
- You must reach other victims
- To properly position for treatment



## **TWO PERSON SEAT CARRY**

Move victim **ONLY** If:

- Scene becomes unsafe
- You must reach other victims
- To properly position for treatment



## Blanket drag

Move victim ONLY If:

- Scene becomes unsafe
- You must reach other victims
- To properly position for treatment



## Walking assist

Move victim ONLY If:

- Scene becomes unsafe
- You must reach other victims
- To properly position for treatment



## Clothes drag

Move victim **ONLY** If:

- Scene becomes unsafe
- You must reach other victims
- To properly position for treatment

# CARE

1. If the victim is conscious, ask:
  - a) **What happened?**
  - b) **Where do you hurt?**
  - c) **Are you on any medications?**

**Provide care for the conditions you find**

# CARE

2. If unconscious, check from head to toe
3. Check A, B, C's

**Airway- is it open?**

**Breathing- is victim breathing?**

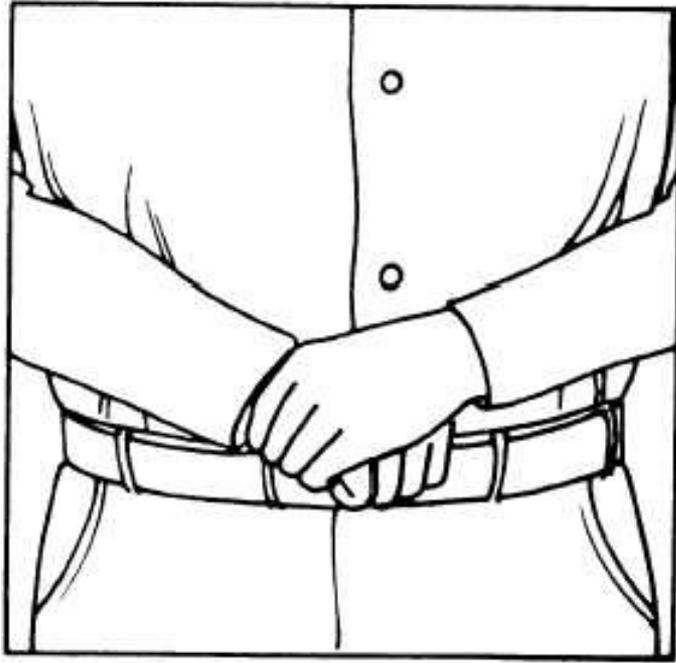
**Circulation- check for a pulse**

# UNIVERSAL PRECAUTIONS

- Use protective equipment such as gloves, goggles and breathing barriers to prevent the transmission of diseases.
- Diseases are transferred through direct contact with blood and body fluids.
- to clean up a spill, apply  $\frac{1}{4}$  cup bleach to a gallon of water solution, let sit for 20 minutes, soak up with paper towels, dispose of properly.

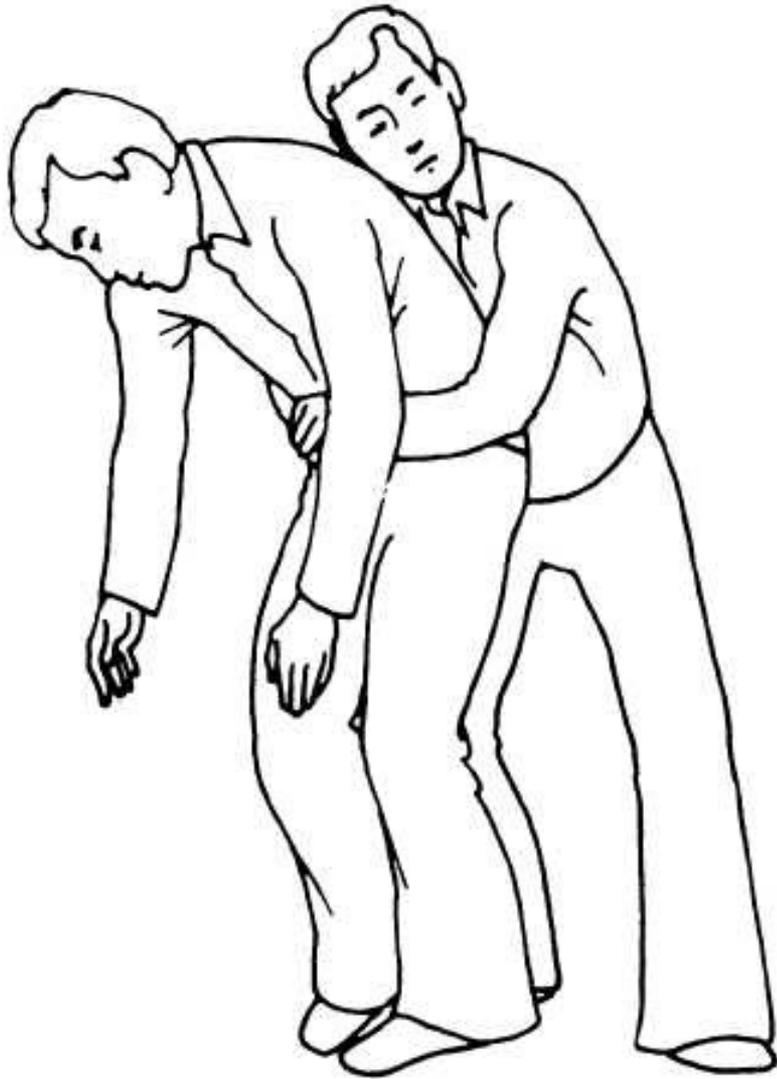
# Conscious Choking:

- If coughing, encourage them to keep coughing
- If they cannot speak, cough, or breathe, they may have a blocked airway. Make sure 911 is called
- Ask if they are choking and if you can help
- Provide 5 back-blows then 5 “abdominal thrusts” formerly known as the “Heimlich”



Stand behind and place one of your feet between the victim's.

1. With one hand, find the bellybutton,
2. Place other hand (thumb side on the victim's belly) just above two finger widths above the belly button
3. Pull upwards with both hands until object is released or victim becomes unconscious



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If victim is pregnant, or too large to reach around abdomen, give chest thrusts by placing hands just in the center of the breastbone and give quick thrusts into the chest.

# Conscious Choking

***If you find yourself alone and choking, take the following actions:***

1. Dial 911, although you cannot talk, the enhanced 911 system lets the dispatcher know where you are
2. Lean over the back of a chair or firm object and Drop yourself so force is exerted on the diaphragm.



CPR- Provides method for oxygen to be circulated to vital organs of the body.

1. Tilt head back, give two rescue breaths,
2. Check for pulse, (take no longer than 10 seconds),
3. If NO pulse, 30 chest compressions followed by two breaths, repeat 30 chest compressions and 2 rescue breaths.. this is a “cycle”.
4. Continue CPR until: EMS arrives and takes over, an AED arrives, the victim begins to breath on their own, or you become too tired to continue

# WOUNDS

- Apply direct pressure to the wound
- Elevate the injury above the heart if there are no broken bones
- **DO NOT USE** a tourniquet
- If bleeding continues, use a pressure point

# BURNS

- COOL area with water
  - If Chemical Burn:
    - Wash with water 15 minutes
    - Remove contaminated clothing
    - Use personal protective equipment
- DO NOT APPLY OILS OR BUTTER**
- Apply sterile dressing

# Strains and Sprains

- Splint a victim only if they must be moved and splinting does not cause further pain
- Splinting provides support for the injured part, splint above and below the injury
- If an injury occurs to the foot, leave the shoe on to provide support.

## Heat related emergencies

**Four environmental factors affect the amount of stress a worker faces in a hot work area**

- 1. temperature,**
- 2. humidity,**
- 3. radiant heat (such as from the sun or a furnace) and**
- 4. air velocity** (wind or breeze)

## Heat related emergencies

Personal characteristics that effects an individual's ability to tolerate heat:

- age,
- weight,
- fitness,
- medical condition(s) and
- acclimatization to the heat.

# **Body's reaction to heat to control temperature:**

- *circulating blood to the skin which*

**Increases skin temperature and allows  
body to give off excess heat**

**“Skin acts as a radiator”**

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***“circulating blood to the skin”***-Increases skin temperature and allows body to give off excess heat

***But....***

**With physical labor, less blood is available to flow to the skin and release the heat**

# **Body's reaction to heat to control temperature:**

***“circulating blood to the skin”***-Increases skin temperature and allows body to give off excess heat *But....* With physical labor, less blood is available to flow to the skin and release the heat

**ADDITIONAL BODY ACTION: “Sweating”**

**Sweating is another means the body uses to maintain a stable internal body temperature in the face of heat.**

**Sweating effectively cools the skin surface, thus cooling the blood (“coolant”)**

**Effectiveness of sweating depends upon:**

- Humidity**
- Sweat volume**

**Low humidity allows sweat to evaporate and cool,**

**The higher the humidity, the less cooling effect of sweating**

***Recent discovery: “HEAT INDEX”***

***Combines temperature and humidity***

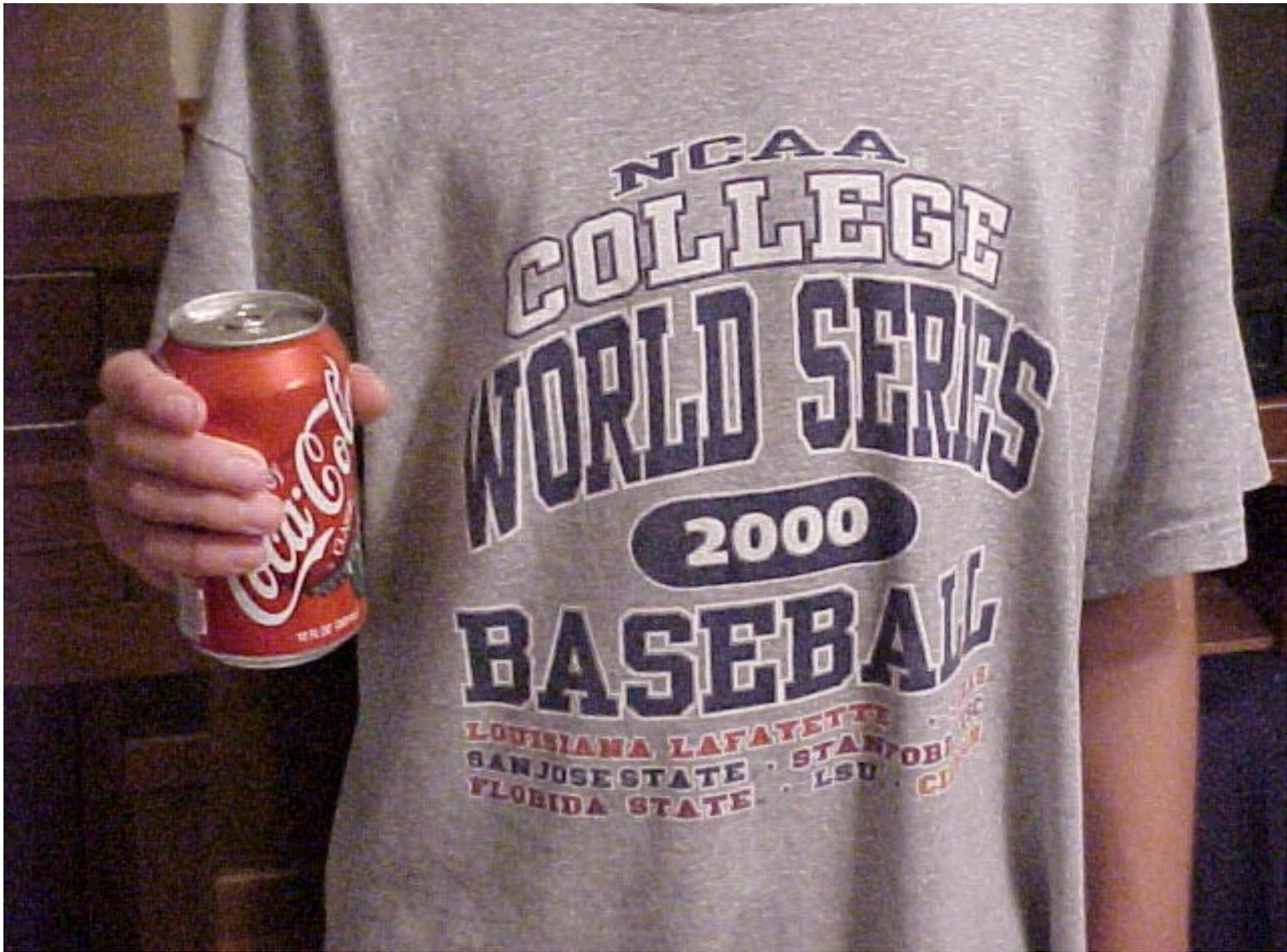
***“FEELS LIKE”***

**We can't control the humidity or the temperature but we all must pay attention to the amount and type of "fluids" we supply our bodies to use as sweat...**

**What is unacceptable, what is good?  
(when it comes to proper fluids for heat)**







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# **PREVENTING HEAT STRESS**

- **Engineering controls**
  - **Work practices**
- **Alternating work and rest**
  - **Acclimatization**
  - **Education**

# HEAT DISORDERS

**Each level, if not treated, gets progressively worse**

- 1. Heat cramps**
- 2. Heat exhaustion**
- 3. Heat stroke (*Life Threatening condition*)**

# TREATMENT OF HEAT DISORDERS

- 1. COOL INDIVIDUAL**
- 2. SPRINKLE WATER ON PERSON TO COOL**
- 3. SIPS OF WATER IF CONSCIOUS**
- 4. LOOSEN CLOTHING**
- 5. CALL 911 IF PERSON IS NON-RESPONSIVE OR SEEMS CONFUSED**



**ANY QUESTIONS???**