

# PEDIATRIC HEAT EMERGENCIES



## Escambia County, Florida - ALS/BLS Medical Protocol

**Hyperthermia** occurs when the patient is exposed to increased environmental temperature and can manifest as heat cramps, heat exhaustion, or heat stroke.

Some tympanic thermometers (Braun Thermoscan<sup>TM</sup> Pro-1 and Pro 3000) will register from 68 - 108 degrees F (tympanic thermometers should not be used in infants).

**Heat Cramps** signs and symptoms include: muscle cramps of the fingers, arms,

legs, or abdomen, hot sweaty skin, weakness, dizziness,

tachycardia, normal BP, and normal temperature.

**Heat Exhaustion** signs and symptoms include: cold and clammy skin, profuse

sweating, nausea/vomiting, diarrhea, tachycardia, weakness, dizziness, transient syncope, muscle cramps, headache, positive orthostatic vital signs, normal or slightly elevated temperature.

**Heat Stroke** signs and symptoms include: hot dry skin (sweating may be

present), confusion and disorientation, rapid bounding pulse followed by slow weak pulse, hypotension with low or absent diastolic reading, rapid and shallow respirations (which may later slow), seizures, coma, elevated temperature above 105 degrees F.

## **Heat Cramps and Heat Exhaustion**

### **Supportive Care**

- 1. Trauma Supportive Care Protocol.
- 2. Remove from warm environment and cool patient.
- 3. Monitor temperature.
- 4. For mild to moderate heat cramps and heat exhaustion, **if patient is conscious** and alert, encourage patient to drink salt containing fluids (e.g. half-strength Gatorade or 10K).

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Page 1 of 2

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### **ALS Level 1**

1. If heat cramps are severe or patient's level of consciousness is diminished, administer fluid challenge of Normal Saline 20 ml/kg IV.

ALS Level 2 (Physician Authorization Required)

None

### **Heat Stroke**

## **Supportive Care**

- 1. Trauma Supportive Care Protocol.
- 2. Remove from warm environment and aggressively cool patient. Remove patient's clothing and cover patient with sheets soaked in ice water. Also, turn A/C and fans on high and apply ice packs to head, neck, chest and groin.
- 3. Monitor temperature. Cool patient to 102 degrees F, then remove wet sheets, ice packs, and turn off fans (avoid lowering temperature too much).

## **ALS Level 1**

1. Treat hypotension with IV fluids. **Avoid using vasopressors and anticholinergic drugs** (may potentiate heat stroke by inhibiting sweating). Administer fluid challenge of Normal Saline 20 ml/kg IV.

**ALS Level 2** (*Physician Authorization Required*)

None

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Page 2 of 2

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