

POLICY: 555.64  
TITLE: Pediatric Heat Illness

EFFECTIVE: 09/01/2026  
REVIEW: 8/2028  
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

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## PEDIATRIC HEAT ILLNESS

- I. AUTHORITY  
Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9
- II. PURPOSE  
To serve as a patient treatment standard for EMRs, EMTs, AEMTs, and Paramedics within their scope of practice.
- III. PROTOCOL  
**Heat Cramps/Exhaustion:** Muscle cramping, dizziness, exhaustion, nausea, vomiting, weakness, headache, diaphoresis, normal or slightly elevated body temperature. Syncope and an altered level of consciousness may occur.

**Heat Stroke:** Altered level of consciousness and elevated core body temperature, usually > 104°F (40°C), often associated with tachycardia, hypotension, and absence of sweating.

**Provider Key:** F = First Responder/EMR    E = EMT    O = EMT Local Optional SOP  
P = Paramedic    A=Advanced EMT    D = Base Hospital Physician Order Required

| HEAT CRAMPS – HEAT EXHAUSTION                                                                                                                         | F | E | O | A | P | D |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| <b>ASSESS</b>                                                                                                                                         | X | X | X | X | X |   |
| <b>COOLING MEASURES:</b> move to cool location and start cooling as soon as possible.                                                                 | X | X | X | X | X |   |
| <b>BLS AIRWAY:</b> okay if airway patent. Support ventilations with appropriate airway adjuncts.                                                      | X | X | X | X | X |   |
| <b>SUPRAGLOTTIC AIRWAY:</b> if GCS is < 8 and not rapidly improving, consider SGA.                                                                    |   |   | X | X | X |   |
| <b>PULSE OXIMETRY:</b> apply and monitor.                                                                                                             |   | X | X | X | X |   |
| <b>CAPNOGRAPHY:</b> apply and monitor if SGA has been placed.                                                                                         |   |   |   |   | X |   |
| <b>OXYGEN:</b> if pulse oximetry < 94% or signs of respiratory distress or hypoperfusion.                                                             | X | X | X | X | X |   |
| <b>ECG MONITOR:</b> lead placement may be delegated. Treat as indicated.                                                                              |   |   |   |   | X |   |
| <b>VASCULAR ACCESS:</b> IV/IO.                                                                                                                        |   |   |   | X | X |   |
| <b>FLUID BOLUS:</b> NS 20 mL/kg as indicated. Reassess after each bolus. Repeat at 10mL/kg bolus. For heat stroke, use cooled IV fluids as available. |   |   |   | X | X |   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | F | E | O | A | P | D |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| <b>HEAT STROKE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |   |   |   |   |   |
| <b>AS ABOVE AND ADDITIONALLY:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | X | X | X | X | X |   |
| <b>COOLING MEASURES:</b> In order of effectiveness, use dependent on availability of resources: <ol style="list-style-type: none"> <li>1. If on scene at an event where staff have initiated cold water immersion (CWI) for suspicion of heat stroke, do not move the patient from cold water immersion until patient starts shivering or 15-20 minutes of immersion, whichever is soonest. Ideal core temperature, if available, would be 102°F (39°C) or less when CWI is discontinued.</li> <li>2. If CWI not available but cool/cold water is, remove clothing and rotate cool/cold wet towels over entire body of patient</li> <li>3. If CWI and cool/cold wet towels not available, remove clothing, splash/sponge patient with water and place cool packs on neck, axillary, and inguinal areas. Promote evaporative cooling by fanning.</li> </ol> | X | X | X | X | X |   |
| <b>TEST FOR GLUCOSE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   | X | X | X | X |   |
| <b>D10:</b> 2 - 4 mL/kg IV/IO if blood sugar < 70 mg/dL for age > 28 days old or 2 mL/kg IV/IO if blood sugar < 40 mg/dL age ≤ 28 days old. Recheck blood glucose 10 minutes post infusion and repeat as needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |   |   | X | X |   |
| <b>GLUCAGON:</b> If no IV/IO access and unable to tolerate oral glucose, give 0.05 mg/kg IM (max 1 mg) if blood glucose < 70 mg/dL. Recheck blood glucose 10 minutes post injection. If blood glucose remains < 70 mg/dL, repeat dose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |   |   | X | X |   |
| <b>MIDAZOLAM:</b> for Status Seizures. Do not delay for IV/IO access. <ul style="list-style-type: none"> <li>• IM/IN: 0.2 mg/kg up to 10 mg every 5 minutes until seizure stops, max total dose 20 mg.</li> <li>• IV/IO: 0.1 mg/kg up to 5 mg every 2 minutes until seizure stops or max total dose 10 mg.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |   |   | X |   |

### Pediatric Normal Vital Signs

| Age         | HR      | RR    | BP            | Temp (C) | Temp (F)   |
|-------------|---------|-------|---------------|----------|------------|
| Premie      | 120-170 | 40-70 | 55-75/35-45   | 36-38    | 96.8-100.4 |
| 0-3 months  | 100-160 | 35-60 | 65-85/45-55   | 36-38    | 96.8-100.4 |
| 3-6 months  | 90-120  | 30-45 | 70-90/50-65   | 36-38    | 96.8-100.4 |
| 6-12 months | 80-120  | 25-40 | 80-100/55-65  | 36-38    | 96.8-100.4 |
| 1-3 years   | 70-110  | 20-30 | 90-105/55-70  | 36-38    | 96.8-100.4 |
| 3-6 years   | 65-110  | 20-25 | 90-110/60-75  | 36-38    | 96.8-100.4 |
| 6-12 years  | 65-100  | 14-22 | 90-120/60-75  | 36-38    | 96.8-100.4 |
| 12+         | 55-100  | 12-20 | 100-135/65-85 | 36-38    | 96.8-100.4 |