Heat Emergencies

1. Follow **General Pre-hospital Care-Treatment Protocol**.
2. Pediatric patients (≤ 14 years of age) utilize **MI MEDIC** for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol
3. Determine history/evidence of heat exposure.
4. Check blood glucose (may be MFR skill, see **Blood Glucose Testing-Procedure Protocol**) and treat hypoglycemia per **Adult or Pediatric Altered Mental Status-Treatment Protocol**.

HEAT CRAMPS:

1. Move the patient to a cool environment and attempt oral liquids (may use commercial sports/rehydration).

HEAT EXHAUSTION:

1. Move the patient to a cool environment.
2. Remove tight clothing.
3. Cool patient, provide air conditioning/fanning. Avoid chilling/shivering.
4. Obtain IV/IO Access and administer fluid bolus **NS** or **LR** wide open (refer to **Vascular Access and IV Fluid Therapy-Procedure Protocol**).
   a. Adults (≥ 14 years of age): up to 1 liter
   b. Pediatrics (<14 years of age): up to 20 mL/kg
5. Patient may take oral fluid replacement rather than IV if not nauseated. Allow oral intake of cool fluids or water (may use commercial sports/rehydration drinks). Do not permit patient to drink if altered mental status, abdominal pain, or nausea is present. Avoid carbonated, alcoholic and caffeinated beverages.
6. Treat nausea according to **Nausea/Vomiting-Treatment Protocol**.

HEAT STROKE:

1. Move the patient to a cool environment.
2. Remove tight clothing.
3. Immediate cooling – provide air conditioning and fanning. Avoid chilling/shivering.
4. Place patient in semi-reclining position with head elevated.
5. Obtain IV/IO Access and administer fluid bolus **NS** or **LR** wide open (refer to **Vascular Access and IV Fluid Therapy-Procedure Protocol**).
   a. Adults (≥ 14 years of age): up to 1 liter
   b. Pediatrics (<14 years of age): up to 20 mL/kg
7. Treat nausea according to **Nausea/Vomiting-Treatment Protocol**.
8. Initiation of aggressive cooling may take priority over transport. Contact Medical Control for further cooling and transport guidance.

MANAGEMENT OF PATIENT WITH EXERTIONAL HEAT STROKE

1. Cool as quickly as possible via ice or cold-water immersion. If immersion is unavailable, cooling should be initiated by dousing the entire skin surface of the patient with cold water and facilitated by fanning.

   b. Cooling may be augmented with the addition of ice packs over as much of the body surface as possible. The most effective locations for ice packs are the palms of the hands, soles of the feet, and the cheeks.
2. Cool first, transport second when possible.
   a. If total time (time on scene and transport) exceeds 30 minutes, on-scene immersive cooling should be immediately implemented prior to evacuation.
   b. Cooling of the patient by the best available means should be continued during transport. Ice-water immersion may be continued with containment devices such as body bags or tarpaulins.
3. Obtain IV/IO Access (consider resting the patient's arm on the side of immersion tub to start IV while patient is still immersed) and administer fluid bolus **NS** or **LR** wide open (refer to **Vascular Access and IV Fluid Therapy-Procedure Protocol**).
   a. Adults (≥ 14 years of age): up to 1 liter
   b. Pediatrics (<14 years of age): up to 20 mL/kg
   c. Efforts to provide IV fluids in suspected heat stroke should not delay rapid whole-body cooling.
4. If patient experiences seizures, refer to **Adult or Pediatric Seizure-Treatment Protocol**.
5. Monitor ECG (lead cables can go in the water).

Protocol Source/References: NASEMSO CLINICAL GUIDELINES
Wilderness Medical Society Clinical Practice Guidelines for the Prevention and Treatment of Heat Illness: 2024 Update. *Wilderness & Environmental Medicine*, Volume 35, Issue 1_suppl.