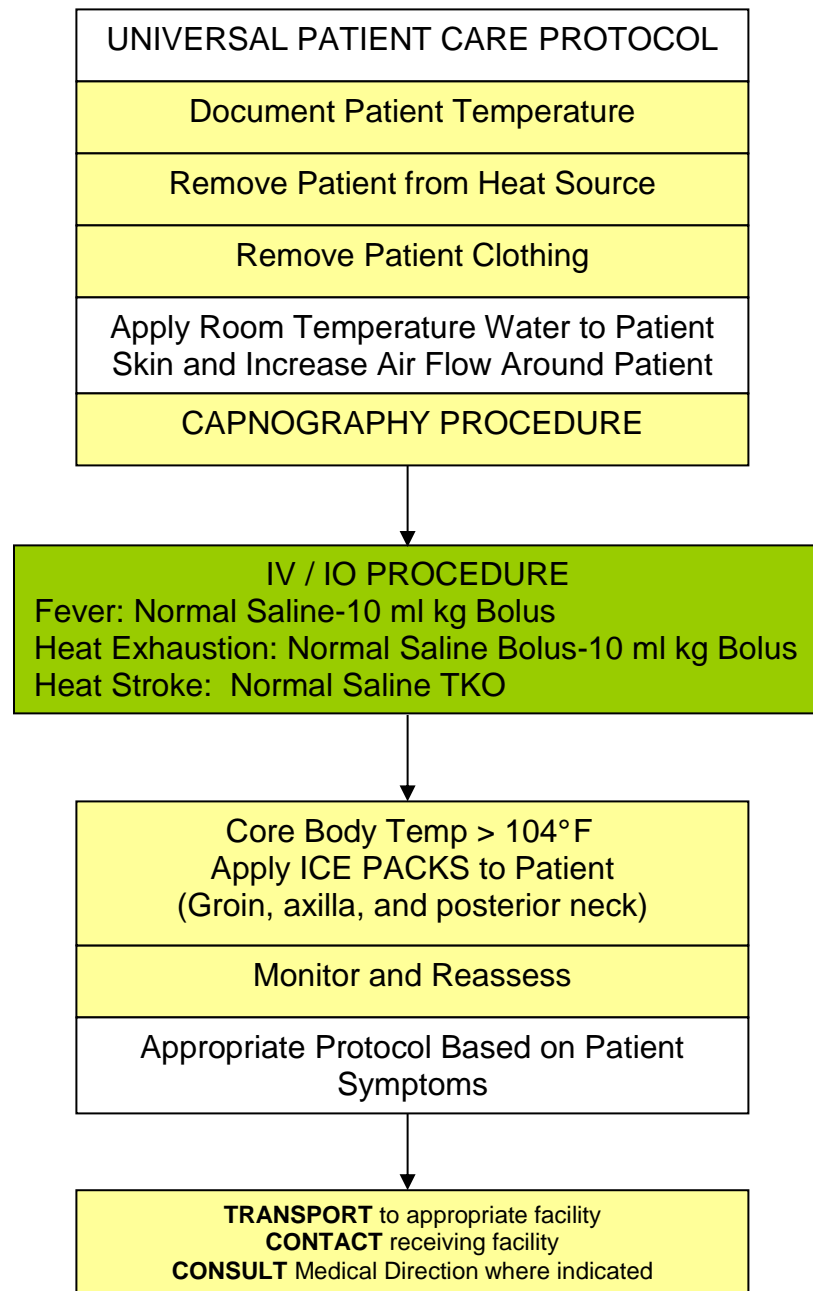




Section 10: Pediatric Medical Emergencies Protocols

PEDS MEDICAL EMERGENCIES: HYPERTHERMIA / HEAT EXPOSURE

| | | |
|---|-------------|---|
| E | EMT | E |
| A | AEMT | A |
| P | PARAMEDIC | P |
| M | MED CONTROL | M |





Section 10: Pediatric Medical Emergencies Protocols

PEDS MEDICAL EMERGENCIES: HYPERTHERMIA / HEAT EXPOSURE-Cont.

PEARLS and KEY POINTS

| HISTORY | SIGNS AND SYMPTOMS | DIFFERENTIAL DIAGNOSIS |
|---|---|---|
| <ul style="list-style-type: none"> • Age • Exposure to increased temperatures and humidity • Past medical history / medications • Extreme exertion • Time and length of exposure • Poor PO intake • Fatigue and / or muscle cramping | <ul style="list-style-type: none"> • Altered mental status or unconsciousness • Hot, dry or sweaty skin • Hypotension or shock • Seizures • Nausea | <ul style="list-style-type: none"> • Fever (infection) • Dehydration • Medications • Hyperthyroidism (storm) • Delirium tremens (DT's) • Heat cramps • Heat exhaustion • Heat stroke • CNS lesions or tumors |

| Heat Exhaustion: Dehydration | Heat Stroke: Cerebral Edema |
|--|--|
| <ul style="list-style-type: none"> • Muscular/abdominal cramping • General weakness • Diaphoresis • Febrile • Confusion • Dry mouth / thirsty • Tachycardia • BP normal or orthostatic hypotension | <ul style="list-style-type: none"> • Confusion • Bizarre behavior • Skin hot, dry, febrile • Tachycardia • Hypotensive • Seizure • Coma |

- **Exam: Mental Status, Skin, HEENT, Heart, Lungs, Neuro**
- Extremes of age are more prone to heat emergencies (i.e. young and old).
- Predisposed by use of: tricyclic antidepressants, phenothiazines, anticholinergic medications, and alcohol.
- Cocaine, Amphetamines, and Salicylates may elevate body temperatures.
- Sweating generally disappears as body temperature rises above 104° F (40° C).
- Intensive shivering may occur as patient is cooled.
- **Heat Cramps** consists of benign muscle cramping secondary to dehydration and is not associated with an elevated temperature.
- **Heat Exhaustion** consists of dehydration, salt depletion, dizziness, fever, mental status changes, headache, cramping, nausea and vomiting. Vital signs usually consist of tachycardia, hypotension, and an elevated temperature.
- **Heat Stroke** consists of dehydration, tachycardia, hypotension, temperature > 104° F (40° C), and altered mental status.
- Patients at risk for heat emergencies include neonates, infants, geriatric patients, and patients with mental illness. Other contributory factors may include heart medications, diuretics, cold medications and / or psychiatric medications.
- Heat exposure can occur either due to increased environmental temperatures or prolonged exercise or a combination of both. Environments with temperature > 90° F and humidity > 60% present the most risk.
- Heat stroke occurs when the cooling mechanism of the body (sweating) ceases due to temperature overload and / or electrolyte imbalances. Be alert for cardiac dysrhythmias for the patient with heat stroke.
- Too much fluid in Heat stroke can cause cerebral edema.
- Change in mental status is hallmark sign of Heat stroke. Only 50% of patients lose sweating mechanism.