

Injury or illness from heat exposure varies depending on the *manner* of exposure (sun, humidity, exertion) and the *amount* of exposure (time, temperature & ambient air).

Heat exposure emergencies range from localized cramping to severe hyperthermia (heat stroke) with unresponsiveness and unconsciousness. The patient's health, predisposing factors and medications may increase the likelihood of heat-related injury or illness. The primary goal in the treatment of the patient at risk for hyperthermia is to cool the patient and restore body fluids.

**Heat disorders:**

**Heat (Muscle) Cramps** – are muscle cramps caused by overexertion and dehydration in the presence of high temperatures. Signs & symptoms include: **Normal or slightly elevated body temperature; generalized weakness; dizziness; warm, moist skin and cramps in the fingers, arms, legs or abdominal muscles.**

**Heat Exhaustion** – is an acute reaction to heat exposure and the most common heat-related illness a pre-hospital provider will encounter. Signs & symptoms include: **Increased body temperature; generalized weakness; cool, diaphoretic skin; rapid, shallow breathing; weak pulse; diarrhea; anxiety; headache and possible loss of consciousness.**

**Heat Stroke** – occurs when the body's hypothalamic temperature regulation is lost. Cell death and damage to the brain, liver and kidneys can occur. Signs & symptoms include: **Cessation of sweating; very high core body temperature; hot, usually dry skin; deep, rapid shallow respirations (which later slow); rapid, full pulse (which later slows); hypotension; confusion, disorientation or unconsciousness and possible seizures.**

**Fever (Pyrexia)** – is the elevation of the body temperature above 100.4°F. Fever is sometimes difficult to differentiate from heat stroke; however, there is usually a history of infection or illness with a fever.

Legend	
	EMR
	EMT
	Intermediate
	Paramedic
	Medical Control



 EMR	1. Ensure patient has a patent airway, is breathing, and has a pulse	 EMR
	2. Move patient to a cool environment.	
	3. Remove clothing as necessary to make the patient comfortable.	
	4. Cold packs may be utilized for the neck (posterior), armpits, groin, and along the thorax. <b>Do not cool the patient to a temperature that will cause them to shiver.</b>	
	5. Oxygen at 15L/min via non-rebreather mask or 6L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support patient's respirations with BVM if necessary.	

 EMT	1. Continue EMR care.	 EMT
	2. Treat other symptoms per the appropriate protocol.	
	3. Initiate ALS intercept if needed and transport as soon as possible.	
	4. Contact receiving hospital as soon as possible (need time to prepare) or Medical Control if necessary.	

 P	 MC	 I	1. Continue EMT care.	 I	 MC	 P
			2. Initiate IV 1-2L bolus of Normal Saline to achieve or to maintain a systolic BP greater than 90 mmHg.			
			3. <b>Versed 2-4 mg IV/IO/IN</b> for shivering. Call Medical Control for additional doses.			
			4. Transport as soon as possible.			
			5. Contact receiving hospital as soon as possible (need time to prepare) or Medical Control if necessary.			