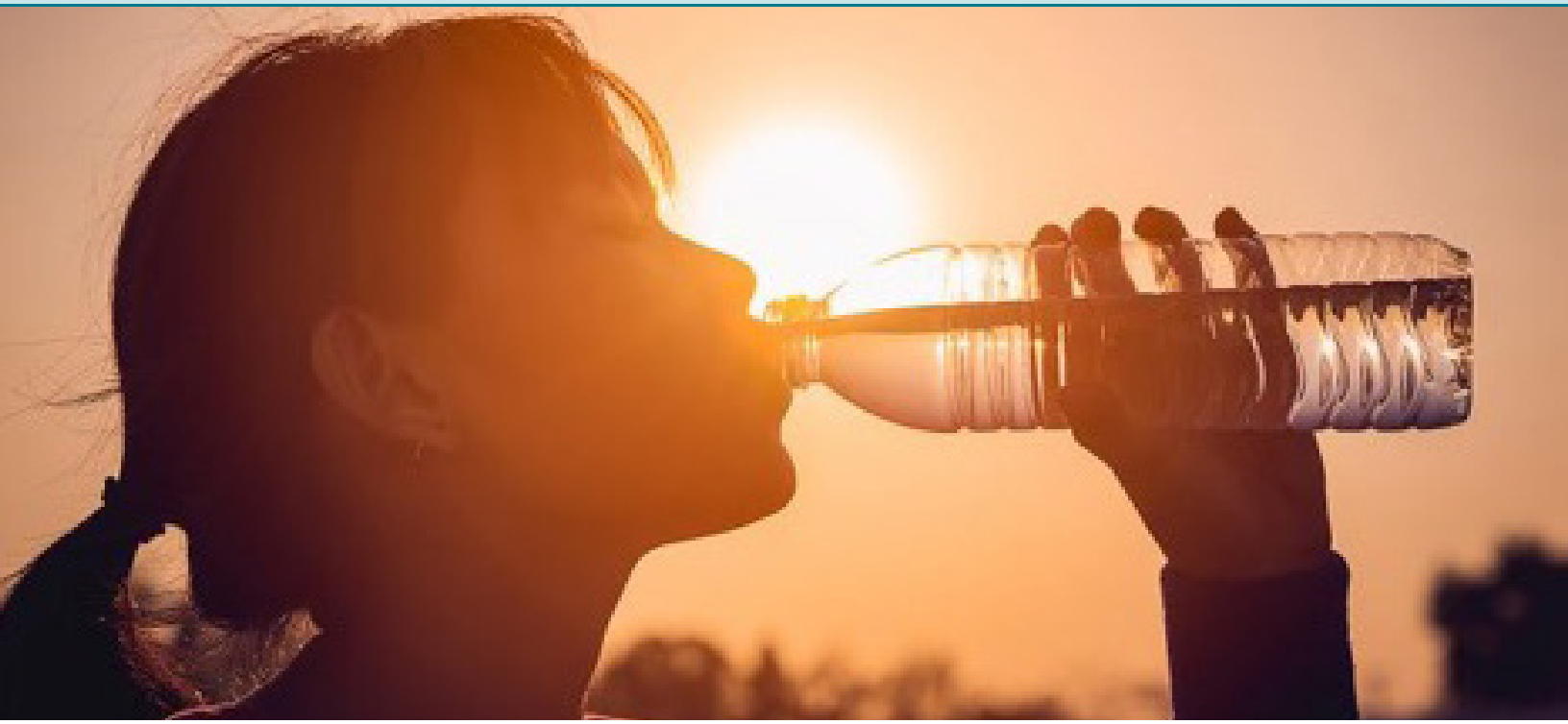
GOAT NOTES

Combine Academy Sports Medicine Newsletter



Students and Parents,

These guidelines were established to increase safety and performance for individuals engaged in physical activity, especially in warm and hot environments. The risks associated with exercise in the heat are well documented, but policies and procedures often do not reflect current state-of-the-art knowledge. Many cases of exertional heat illness are preventable and can be successfully treated if onsite personnel identify the condition and implement appropriate care in a timely manner. **(EARLY DETECTION IS KEY!!!!)**

Signs and symptoms of exertional heat stroke (EHS), heat exhaustion, heat cramps and exertional hyponatremia are as follows:

Heat Stroke- CNS dysfunction (altered consciousness, coma, convulsions, disorientation, irrational behavior, decreased mental acuity, irritability, emotional instability, confusion, hysteria, apathy) and (2) hyper thermic (rectal temperature usually >104°F/40°C) immediately post-incident.

Treatment- Immediately immerse athlete in tub of cold water (approximately 35°-58°F/1.67°-14.5°C), onsite if possible. Remove clothing/equipment. (Immersion therapy should include constant monitoring of core temperature by rectal thermistor [or thermometer].)

• If immersion is not possible, transport immediately. Alternative cooling strategies should be implemented while waiting for and during transport.
Heat Exhaustion-athlete has obvious difficulty continuing intense exercise in heat. Athlete still has the ability to sweat. If any CNS dysfunction is present, it will be mild, and symptoms will subside quickly with treatment and as activity is discontinued.

Treatment- Remove athlete from play and immediately move to a shaded or air-conditioned area.

• Remove excess clothing and equipment.
• Cool athlete until rectal temperature is approximately 101°F (38.3°C).
• Have athlete lie comfortably with legs propped above heart level.

• If athlete is not nauseated, vomiting or experiencing any CNS dysfunction rehydrate orally with chilled water or sports drink. If athlete is unable to take oral fluids, implement intravenous infusion of normal saline.
• Monitor heart rate, blood pressure, respiratory rate, rectal temperature and CNS status.
• Transport to an emergency facility if rapid improvement is not noted with prescribed treatment.

Muscle Cramps- Intense pain (not associated with acute muscle strain) and persistent muscle contractions in working muscles during and after pro- longed exercise and most often associated with exercise in heat.

Treatment- Re-establish normal hydration status and replace some sodium losses with a sports drink or other sodium source.
• Some additional sodium may be needed (especially in those with a history of heat cramps) earlier in the activity (pre-cramps) and is best administered by dilution into a sports drink. For example, 1/2 g of sodium (equal to the amount of sodium found in 1/4 tsp of table salt) dissolved in about 1 L (approximately 32 oz) of a sports drink early in the exercise session provides ample fluids and sodium, and the flavor (while certainly saltier) is still very palatable.
• Light stretching, relaxation and massage of the involved muscle may help acute pain of a muscle cramp.

Exertional Hyponatremia- increasing headache, nausea, vomiting (often repetitive), swelling of extremities (hands and feet), irregular diet (e.g., inadequate sodium intake), (5) during prolonged activity (often lasting >4 hours)

Treatment- If blood sodium levels cannot be determined onsite, hold off on rehydrating athlete (may worsen condition) and transport immediately to a medical facility.

• The delivery of sodium, certain diuretics or intravenous solutions may be necessary. All will be monitored in the emergency department to ensure no complications develop.

References:

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