

RESEARCH TO CLINICAL PRACTICE

August 2022



Exertional Heat Illness

Summer's high temperatures put patients at increased risk for heat illness. We can reduce the prevalence of exertional heat illness and eliminate risk of death from exertional heat stroke. Review the resources below to supplement and enhance your prevention, recognition, and management strategies.

NATA Foundation Funded Research

Rebecca Lopez, PhD, ATC, CSCS

Physiological, Perceptual & Hydration Measures of High School Football Players During Preseason Practices in the Heat

Our outcomes on the observed responses to football practices in a hot, humid environment to identify heat illness risk. Core body temperature and body mass losses were significantly higher with football equipment, compared to days without equipment.

Aliza Nedimyer, MA, LAT, ATC

Information Seeking in Athletic Trainers Related to Exertional Heat Illness

With very few ATs reporting barriers to accessing information sources needed to inform their clinical practice related to exertional heat illnesses, the existing gap between knowledge and clinical practice may be best influenced by hands-on education and modifications to content delivery.

RESOURCES

Position Statement

National Athletic Trainer's Association
[Position Statement: Exertional Heat Illness](#)

Consensus Statements

[Prehospital Care of Exertional Heat Stroke](#)

Infographic

NATA [Beat the Heat](#)

Website

[Korey Stringer Institute](#)

from Recent Articles (links available below)

Best practice for exertional heat stroke evaluation and treatment includes early recognition of athletes with potential EHS, a rectal temperature measurement to confirm EHS, and cold-water immersion before transport to a hospital. Proactive planning, communication and persistence can aid in the recognition and care of EHS. [Miller et al. 2021, JAT, Roundtable on Preseason Heat Safety in Secondary School Athletics: Prehospital Care of Patients with Exertional Heat Stroke](#)

This article outlines several consensus recommendations for organizations to implement into their clinical practice. Main changes from previous research includes the inclusion of all sports to implement heat acclimatization (not just football). Key recommendations include: training occurring 60-90m per day for 10 training sessions over 14 days, equipment and work:rest changes within the process, and improved dissemination of the heat acclimatization program to key stakeholders. [Adams et al., 2021, JAT, Roundtable on Preseason Heat Safety in Secondary School Athletics: Heat Acclimatization](#)

This document outlines 16 new and specific consensus guidelines on environmental monitoring procedures. Key recommendations include: conducting heat stress monitoring at the location of play, using wet-bulb globe temperature (WBGT) measured at a height of 3-4ft off the ground at < 30 min intervals, work-to-rest ratio differences based on specific geological locations. [Hosokawa et al. 2021, JAT, Roundtable on Preseason Heat Safety in Secondary School Athletics: Environmental Monitoring During Activities in the Heat](#)

Patient collapsed at the end of a race and medical staff obtained a rectal temperature (106.9F). Patient was submerged in a cold-water immersion tub and cooled to 100.1F. Patient was transported to emergency department but not admitted. Cool first, transport second. [Garrett et al. 2021, JAT, Proper Recognition and management of Exertional Heat Stroke in a High School Cross Country Runner: A Validation Clinical Case Report](#)

highlights 2022 Free Communications Program (link to JAT Supplement available below)

- Written Policy Adoption for Emergency Preparedness and Environmental Injuries in West Virginia High Schools (McCool et al.) S-51
- Information Seeking in Athletic Trainers Related to Exertional Heat Illness – A Qualitative Exploration (Nedimyer et al.) S-52
- Prevalence of Legal Proceedings in Exertional/Medical Causes of Sport-Related Sudden Death (Yeargin et al.) S-54
- Analysis of High School and College American Football Deaths by Player Position (Stearns et al.) S-55
- Cold Intravenous Fluids are Inadequate for Whole-Body Cooling Rates Required for Exertional Heat Stroke Treatment (McDermott et al.) S-213
- High School Coaches' Knowledge, Perception, and Current Practices Regarding Exertional Heat Illness in the United States (Roberts, Hillman) S-214
- State High School Sports Safety Policies: Cold Water Immersion and Cool First, Transport Second Requirements (Eason et al.) S-216
- Impact of Health and Safety Meetings on State Level Policy Adoption for Secondary School Athletics (Grace et al.) S-281