

TABLE 1 Key Exertional Heat-Illness Risk Factors During Exercise, Sports, and Other Physical Activities and Recommended Responses (Actions) for Reducing Physiologic Strain and Improving Activity Tolerance and Safety

Risk factors

Hot and/or humid weather

Poor preparation

Not heat-acclimatized

Inadequate prehydration

Little sleep/rest

Poor fitness

Excessive physical exertion

Insufficient rest/recovery time between repeat bouts of high-intensity exercise (eg, repeat sprints)

Insufficient access to fluids and opportunities to rehydrate

Multiple same-day sessions

Insufficient rest/recovery time between practices, games, or matches

Overweight/obese (BMI \geq 85th percentile for age) and other clinical conditions (eg, diabetes) or medications (eg, attention-deficit/hyperactivity disorder medications)

Current or recent illness (especially if it involves/involved gastrointestinal distress or fever)

Clothing, uniforms, or protective equipment that contribute to excessive heat retention

Actions^a

Provide and promote consumption of readily accessible fluids at regular intervals before, during, and after activity

Allow gradual introduction and adaptation to the climate, intensity, and duration of activities and uniform/protective gear

Physical activity should be modified

Decrease duration and/or intensity

Increase frequency and duration of breaks (preferably in the shade)

Cancel or reschedule to cooler time

Provide longer rest/recovery time between same-day sessions, games, or matches

Avoid/limit participation if child or adolescent is currently or was recently ill

Closely monitor participants for signs and symptoms of developing heat illness

Ensure that personnel and facilities for effectively treating heat illness are readily available on site

In response to an affected (moderate or severe heat stress) child or adolescent, promptly activate emergency medical services and rapidly cool the victim

With any of these risk factors or other medical conditions²⁵ adversely affecting exercise-heat safety present, some or all of the actions listed may be appropriate responses to reduce exertional heat-illness risk and improve well-being.

^a As environmental conditions become more challenging (heat and humidity increase) and as additional other listed risk factors are present, the possible actions to improve safety become more urgent. Note that each listed action does not necessarily correspond or apply to any particular or every listed risk factor.