



Chambersburg Area School District Athletic Department Heat Exposure Guidelines

Sports Medicine Staff will alert the Director of Athletics, coaches, and student-athletes, by 12:00 PM each day if temperatures fall within the five categories below, and let them know whether the practice may be a “Black,” “Red,” “Orange,” “Yellow,” or “Green.”

(These weather decisions are based off of temperatures and WBGT readings. The WetBulb Globe Temperature (WBGT) is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle and cloud cover (solar radiation). This differs from the heat index, which takes into consideration temperature and humidity and is calculated for shady areas.)

BLACK: When WBGT temperature is **92.0° F or above**

- Extreme Conditions.
- **Consider CANCELING OUTDOOR ACTIVITIES**

RED: When WBGT temperature is **90.1-91.9° F**

- High Risk for Heat Related Illness
- Include 5-10 minute fluids break every 15-20 minutes.
- If applicable, no pads are to be worn.
- **MAXIMUM 1 HOUR PRACTICE**

ORANGE: When WBGT temperature is **87.1-90° F**

- Moderate Risk for Heat Related Illness
- Include 5-10 minute fluids break every 15-20 minutes.
- If applicable, only upper pads are to be worn.
- **MAXIMUM OF TWO HOUR PRACTICE**

YELLOW: When WBGT temperature is **82.2-87.0° F**

- Less than Ideal Conditions
- **INCLUDE 5-10 MINUTE WATER BREAK EVERY 20-25 MINUTES**

GREEN: When WBGT temperature is **82.1° F and below**

- Good conditions
- **INCLUDE 5-10 MINUTE WATER BREAK EVERY 20-30 MINUTES**

Cat 3	Cat 2	Cat 1	Activity Guidelines
< 82.0°F < 27.8°C	< 79.7°F < 26.5°C	< 76.1°F < 24.5°C	Normal Activities – Provide at least three separate rest breaks each hour with a minimum duration of 3 min each during the workout.
82.2 - 86.9°F 27.9-30.5°C	79.9 - 84.6°F 26.6-29.2°C	76.3 - 81.0°F 24.6-27.2°C	Use discretion for intense or prolonged exercise; Provide at least three separate rest breaks each hour with a minimum duration of 4 min each.
87.1 - 90.0°F 30.6-32.2°C	84.7 - 87.6°F 29.3-30.9°C	81.1 - 84.0°F 27.3-28.9°C	Maximum practice time is 2 h. For Football: players are restricted to helmet, shoulder pads, and shorts during practice. If the WBGT rises to this level during practice, players may continue to work out wearing football pants without changing to shorts. For All Sports: Provide at least four separate rest breaks each hour with a minimum duration of 4 min each.
90.1 - 91.9°F 32.2-33.3°C	87.8 - 89.6°F 31.0-32.0°C	84.2 - 86.0°F 29.0-30.0°C	Maximum practice time is 1 h. For Football: No protective equipment may be worn during practice, and there may be no conditioning activities. For All Sports: There must be 20 min of rest breaks distributed throughout the hour of practice.
≥ 92.1°F ≥ 33.4°C	≥ 89.8°F ≥ 32.1°C	≥ 86.2°F ≥ 30.1°C	No outdoor workouts. Delay practice until a cooler WBGT is reached.

DEFINITION OF HEAT ILLNESS: Heat illness is closely associated with physical activity and its occurrence increases with a rise in temperature and relative humidity. It is usually classified in three categories: heat cramps, heat exhaustion, and heat stroke. Although most often occurring in hot, humid weather, heat illness can also occur with the absence of both heat and/or humidity.

Coaches must watch student-athletes carefully for signs of trouble, particularly athletes who lose too much weight, overweight student-athletes, and the eager student-athletes who constantly competes at top capacity. Be aware of trouble signs such as nausea, incoherence, fatigue, weakness, vomiting, cramps, weak/rapid pulse, visual disturbances and unsteadiness.

Coaches must know what to do in case of an emergency. They should be familiar with immediate first aid practices and prearrange procedures for obtaining medical care, including ambulance service.

The coach must know both the temperature and humidity of the activity location. The greater the humidity the more difficult it is for the body to cool itself.

If any athlete is noted having difficulties in the heat. Activity should be closely monitored or cancelled because others are likely also to have difficulties.

Signs and Symptoms of Heat Illness:

- Headache
- Dizziness
- Rapid pulse
- Nausea/Vomiting/Diarrhea
- Skin is flushed/cool and pale
- Disoriented/confusion

- Shallow breathing
- Muscle cramping
- Red, dry skin
- Seizures
- Loss of consciousness/Collapse
- Unusual behavior/Irritability

Any athlete who collapses or demonstrates multiple signs and symptoms should have core body temperature checked. These athletes should be sent to the emergency room for evaluation.

Exertional Heat Stroke: Defined as core body temperature > 104 degrees F Delay in recognition/treatment could be fatal. Initiate cooling and Emergency Action Plan immediately.

Exertional Heat Exhaustion: Defined as an elevated core body temperature between 102-104 degrees F. This condition is not as severe as heatstroke but if left untreated it can progress to heat stroke. Initiate cooling procedure immediately. No return to activity.

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Exercise-Associated Muscle (Heat) Cramps:

- Occurs during or after intense exercise as an acute, painful, and involuntary muscle contraction
- Causes may include dehydration, electrolyte imbalances, neuromuscular fatigue, or a combination of factors.
- Signs and Symptoms: dehydration, thirst, sweating, transient muscle cramps, fatigue.

Exercise (Heat) Exhaustion:

- Occurs most frequently in hot, humid conditions and causes an inability to continue exercise.
- May be caused by dehydration, heavy sweating, sodium loss, and energy depletion.
- Signs and Symptoms: pallor, persistent muscle cramps, urge to defecate, weakness, fainting, nausea, decreased urine-output, cool and clammy skin, anorexia, diarrhea, body temp between 97-104°F.

Exertional Heat Stroke:

- Occurs when core temperature is elevated (usually greater than 104°F) with associated signs of organ system failure due to hyperthermia and physical activity. Caused by an overwhelmed temperature regulation system due to excessive endogenous heat production or inhibited heat loss due to environmental conditions.

- Signs and Symptoms: tachycardia, hypotension, sweating (although skin may be wet or dry), hyperventilation, altered mental status, vomiting, diarrhea, seizures, coma, CNS changes
- Life-threatening condition that can be fatal unless promptly recognized and treated.

PREVENTION OF HEAT ILLNESS GUIDELINES:

- All pre-participation examinations will identify student-athletes who may be predisposed to heat illness or have a history of heat illness.
- The Sports Medicine Department Staff will be onsite at most practices and competitions to assist in providing hydration and access to further cooling supplies. The staff will be aware of the signs and symptoms of heat illness to properly recognize and intervene on behalf of the student-athlete.
- The certified athletic training staff will help educate athletes and coaches regarding the necessary time needed to have student-athletes adapt to their environment. Acclimatization should be a gradual progression. Well-acclimatized athletes should be able to train 1 to 2 hours under the same heat conditions that will be present for their event.
- In addition, the certified athletic trainer should know how to use a wet-bulb globe temperature (WBGT) and/or a sling psychrometer, decipher the corresponding temperature graphs for these instruments, and base the level of physical activity upon the gathered information. This will be used as one of the factors in determining any risk of heat illness associated with relevant environmental conditions.

Basic first Aid for Heat Illness- Cooling Procedures

1. Move the athlete to a shaded area or air conditioned room if available.
 2. Remove equipment and unnecessary clothing.
 3. Lay athlete on his/her back with legs elevated.
 4. Massage ice water soaked towels on student-athletes head and legs.
 5. Ice packs to the neck, arm pits, and groins.
 6. Have athlete drink fluids if able.
- * Ice water bath is the fastest way to cool an athlete with exertional heat illness, if available.
- * Stop Cooling procedure after core body temperature reaches < 102 degrees (F).

Returning to Activity Following Exertional Heat Stroke or Exhaustion:

Heat Stroke: After episode of heat stroke refrain from exercise for 1 week and then gradual return as tolerated. Consult your treating physician.

Heat Exhaustion: Return to activity gradually over 24-48 hours if tolerated. Consult your treating physician.