



Indiana Soccer/ Noblesville United Soccer Club Hot Weather Recommendations



In all cases, age group and competitive level must be taken into consideration.

I. HEAT INDEX

Heat Index can be described as “what it feels like outside”. By definition, the Heat Index is the relationship between temperature and humidity, which can produce detrimental effects on the body. The Heat Index changes throughout the day: midday (12:00-4:00pm) is often the hottest.

When it is hot the body sweats, in which the water in the sweat evaporates and carries heat away from the body. Sweating cools the body through evaporation. Now, imagine that it is hot outside, and the humidity is relatively high. Humidity is basically how much water is already in the air. When you sweat, the only way you cool down is through evaporation of water from your skin. But if the air is holding too much water already, the sweat stays on your skin and you get little to no relief from the heat. High relative humidity retards evaporation, robbing the body of its ability to cool itself.

The Heat Index for each day will dictate any cancellations or restricted activity. This heat plan is designed to protect the athletes from having heat related illnesses or problems. This guide is to assist coaches and administrators when making decisions about whether it is appropriate to modify and/or suspend athletic activities. Thirty (30) minutes prior to the start of activity, heat index readings should be taken at the activity site.

HEAT INDEX GUIDELINES FOR TRAINING SESSIONS AND GAMES

Heat Index under 90°



Training Sessions:

- Provide ample amounts of water. This means water should always be available and athletes should take in as much water as they desire.
- Optional water breaks every 30 minutes for 10 minutes duration.
- Ice-down towels for cooling
- Watch/monitor athletes carefully for any heat distress and any necessary action.



Games:

- Water should always be available and athlete should take in as much water as they desire.

Heat Index 90° to 94°

Training Sessions:

- Recommended water breaks every 30 minutes for 10 minutes in duration.
- Ice-down towels, water sprinklers, fans, shade etc...for cooling.
- Watch/monitor athletes carefully for any heat distress.

Games:

- Recommended water breaks halfway through each half (when ball is out of play), 2 minutes in length.
- Ice-down towels, water sprinklers, fans, shade etc...for cooling.
- Watch/monitor athletes carefully for any heat distress and any necessary action.

Heat Index 95° to 99°

Training Sessions:

- Re-check temperature and humidity every 30 minutes to monitor for increased Heat index.
- Provide ample amounts of water. This means water should always be available and athletes should take in as much water as they desire.
- Mandatory water breaks every 30 minutes for 10 minutes duration.
- Ice-down towels, water sprinklers, fans, shade etc... for cooling.
- Watch/monitor athletes carefully for any heat distress and any necessary action.

Games:

- Re-check temperature and humidity every 30 minutes to monitor for increased Heat index.
- Mandatory water breaks halfway through each half (when ball is out of play), 2 minutes in length.
- Ice-down towels, water sprinklers, fans, shade etc...for cooling.
- Watch/monitor athletes carefully for any heat distress and any necessary action.

Heat index 100° to 103°

Training Sessions:

- Re-check temperature and humidity every 30 minutes to monitor for increased Heat index.
- Provide ample amounts of water. This means water should always be available and athletes should take in as much water as they desire.
- Mandatory water breaks every 20 minutes for 10 minutes duration.
- Ice-down towels, water sprinklers, fans, shade etc... for cooling.
- Watch/monitor athletes carefully for any heat distress and any necessary action.

- Postpone practice to later in day if possible.
- 👤 Games:
 - Re-check temperature and humidity every 30 minutes to monitor for increased Heat index.
 - Mandatory water breaks halfway through each half (when ball is out of play), 2 minutes in length.
 - Ice-down towels, water sprinklers, fans, shade etc...for cooling.
 - Watch/monitor athletes carefully for any heat distress and any necessary action.

Heat Index 104° and above

- 👤 Stop all outside activity in practice and/or play, and stop all inside activity if air conditioning is unavailable.

II. HEAT STRESS and ATHLETIC PARTICIPATION

Heat Stress and Athletic Participation conducted in very hot and humid

weather. During hot weather conditions the athlete is subject to the following:

Heat Related Illness	Treatment
Heat Cramps are involuntary muscle spasms.	Rest in a cool place. Massage cramp with ice and passive stretching. Replenish fluids with water. Return to play when symptom free.
Heat Exhaustion involves: profuse sweating, dizziness, weakness, nausea, headache.	Remove unnecessary clothing & equipment, towel with cool water and/or ice the neck region, armpits, and near groin areas (rapidly cool the body). Rest in cool place. Discontinue activity until thoroughly recovered. Return to play when symptom free.
Heat Stroke: A <u>MEDICAL EMERGENCY</u> associated with nausea seizures, disorientation, a glassy stare and possible unconsciousness or coma. It may occur suddenly with being preceded by any other signs. The individual is usually unconscious with a high body temperature and a hot dry skin. Heat stroke victims, contrary to popular belief, may sweat profusely.	<u>ACTIVATE EMS!!!</u> Remove unnecessary clothing & equipment. Rest in a cool place. Rapidly cool body with ice on neck region, armpits and near groin regions (rapidly cool the body). Treat for shock. Return to play when released by a physician.

With any Heat Related Illness, treatment for all heat conditions involves immediately moving the person to a cool place, rapidly cooling the body, and removing all equipment and unnecessary clothing. Administer cool fluid. Elevate the feet above

the heart to maintain blood pressure and circulation to the brain.

The following practices and precautions are recommended for athletic participation:

- 👁️ Each athlete should have a completed Athlete's Health Record consisting of physical examination from a physician, nurse practitioner or physician's assistant, parent's informed consent and authorization to treat in emergencies, emergency contacts, insurance information and modified medical history before he or she may practice or compete.
- 👁️ Along with physical conditioning the factor of acclimatization to heat is important. Acclimatization is the process of becoming adjusted to heat. It is essential to provide for GRADUAL ACCLIMATIZATION TO HOT WEATHER. It is necessary for an athlete to exercise in the heat if he/she is to become acclimatized to it. It is suggested that a graduated physical conditioning program be used and the 80% acclimatization can be expected to occur after the first 7-10 days. Research states that most heat related fatalities occur in the first four (4) days of preseason practice. Please acclimate your athletes to the heat with gradual practice sessions.
- 👁️ The old idea that water should be withheld from athletes during workouts has NO SCIENTIFIC FOUNDATION. The most important safeguard to the health of the athlete is the replacement of water. Water must be on the field and readily available to the athletes at all times. It is recommended that a minimum 10-minute water break be scheduled for every twenty (20) minutes of heavy exercise in the heat. Athletes should rest in a shaded area during the break. WATER SHOULD BE AVAILABLE IN UNLIMITED QUANTITIES. Check and be sure athletes are drinking the water.
- 👁️ **Coaches, know what to do in case of an emergency and have your emergency plans written with copies to all your staff. All coaches should be CPR and First Aid Certified by either the American Red Cross or the American Heart Association. Coaches should maintain an appropriate First Aid Kit at all practices and competitions along with injury ice and bags. Be familiar with immediate First Aid practice and prearranged procedures for obtaining medical care, including ambulance service.**

III. HYDRATION TIPS AND FLUID GUIDELINES

Get you players involved. Teach them to become responsible for their personal health and safety. The cooler they stay the harder and more effective they can play.

- 👁️ Have your athletes assess their hydration status. Methods include:
 - ✓ Incorporate weight charts into your program for the players to use at home. Tell your athletes to weigh before and after each practice. Record the weights and the difference. Typically, a loss of 1-2 pounds indicates possible dehydration and inadequate drinking. Over a 3% weight loss the athlete should not be allowed to practice in hot and humid conditions. Do

not allow athletes to practice until they have adequately replaced their weight by rehydrating.

- Urine color can often signal dehydration. Urine that is clear or lightly tinted (color of lemonade) usually means the athlete is well hydrated. Urine that is gold colored or the color of apple juice is representative of dehydration.
- Encourage your athletes to prepare for activity by drinking early, preferably 2 hours before. Tell them to avoid beverages containing caffeine, alcohol, and /or carbonation. They are not effective in hydrating the body adequately.
- Remind athletes to continue drinking during activity. That amounts to 1 cup every 15 minutes.
- Teach your athletes how to recognize signs and symptoms of dehydration: headache, nausea, dizziness, cramps, weakness, etc...Encourage them to do the things necessary to prevent heat related illnesses and how to handle symptoms if a situation should arise.

SAMPLE HYDRATION PLAN	
Assessment	Weight Loss > 1-2 lbs. Urine Color: gold or color of apple juice INCREASED RISK OF HEAT RELATED ILLNESSES
Prepare	2 hours prior: drink ~ cups 10 minutes prior: drink ~ 1 cup
Keep Drinking	~ 4 cups per hour of play
Recovery	Within 2 hours of competition: ~ 2 cups per lb. of weight loss
Be Alert	Teach Athletes to recognize warning signs of dehydration.

Remember:

- High-body-fat athletes can have a harder time with exercise and can become dehydrated faster than lower-body-fat athletes working out under the same environmental conditions.
- Poor acclimatization/fitness levels can greatly contribute to an athlete's dehydration problems.
- Medications, fevers and illness greatly affect an athlete's dehydration problems.
- Clothing, such as dark, bulky, or rubber protective equipment can drastically increase the chance of heat illness and dehydration.

The best management of heat related illnesses is prevention.

IV. MONITORING ATHLETES

Coaches and team support staff must closely monitor all players for signs and symptoms of developing heat-related injury during practice or competition in stressful environments. Players who are not acclimated or aerobically fit warrant closer and constant scrutiny for heat illness.

- 👁️ Pre-activity body weight and urine color can be used as indirect indicators of hydration status.
- 👁️ Body weight measurements taken just before and after activity can help in determining the amount of fluid that should be replaced to assist in recovery before the next activity and to educate regarding better fluid replacement during activity.
- 👁️ There should be an adequate number of coaches and staff to effectively monitor all athletes on the field for signs of heat illness.
- 👁️ All players should be observed during activities for changes in performance or personality that might be early indications of developing heat injury.
- 👁️ Any changes in player performance, personality, or wellbeing, including pale color, bright red flushing, dizziness, headache, excessive fatigue, fainting, vomiting, or complaints of feeling hot or cold during activity should be sufficient reason to **immediately** stop activity for all affected players.
- 👁️ Players should be encouraged to “watch out” for each other.
- 👁️ If exertional heat stroke is suspected, players should be stripped of equipment and cooled in a tub of cold water or by using rapidly rotating ice water towels to the extremities, trunk, and head and ice packs in the armpits, groin, and neck areas. Until emergency personnel can assume care and evacuate the athlete to the nearest emergency facility. Importantly, cooling should continue in route.
- 👁️ If players experience severe muscle pain and weakness after activity, they should monitor urine color. If urine becomes tan or brown in the first hour up to several days after activity, they should immediately seek medical attention, as this may indicate that the kidneys are not functioning properly.

V. ACTIVITY MODIFICATIONS

Coaches need to anticipate as best they can (erring on the side of caution) the challenges facing a player, and implement appropriate changes to effectively reduce the associated risks of heat and improve the overall safety for all athletes.

- 👁️ Midday (12:00 – 4:00pm) is often the hottest part of the day, especially if it is a bright, sunny day.
- 👁️ When conditions are too extreme (i.e. high heat index), activity should be canceled altogether, moved into air-conditioned spaces, or held outside as walk-through sessions with regular breaks for fluid consumption and reduced sun exposure.
- 👁️ Adjusting the work-to-rest ratio, by lowering the activity duration and/or intensity and increasing the frequency and duration of breaks, is an effective way to lower the occurrence of heat related risks.
- 👁️ Players should wear light-colored clothing during activity.
- 👁️ Regular breaks should be included in each activity schedule, to allow rest, cooling, and fluid replacement. Breaks should be **more frequent**, as heat and humidity rise and the risk of excessive heat strain increases.

- 👁️ Fluid replacement should be further promoted by providing chilled fluids, easy access, and adequate time for ingestion, to encourage sufficient fluid intake and lessen progressive dehydration on the field. Common barriers to adequate fluid intake include a limited number of water coolers and excessive distance to the fluid stations.
- 👁️ During breaks, players should use shade when it is available, to reduce heat load.
- 👁️ Activity parameters should be individualized for athletes known to be at greater risk of heat injury.
- 👁️ Players should not use stimulants such as ephedrine, and high-dose caffeine that are often found in certain dietary supplements and “energy” drinks.


Heat Index Chart (in Fahrenheit %)


Relative Humidity (Percent)


		Relative Humidity (Percent)													
		40	45	50	55	60	65	70	75	80	85	90	95	100	
Air Temp (F)	80	80	80	81	81	82	82	83	84	84	85	86	86	87	
	84	83	84	85	86	88	89	90	94	94	96	98	100	103	
	90	91	93	95	97	100	103	105	113	113	117	122	127	132	
	94	97	100	103	106	110	114	119	129	135	135				
	100	109	114	118	124	129	130								
	104	119	124	131	137										


Temperatures inside the chart are Heat Index Temperatures

Please read the entire document which covers prevention, indicators and treatment.

 Comfortable for outdoor play; Be sure to have water available.

 Caution: Be sure to have water available, more frequent water breaks, encourage water breaks during games and monitor athletes carefully.

 Caution: Be sure to have water available, more frequent water breaks, water breaks during games and monitor athletes carefully.

 Stop all outside activity and all inside activity if air conditioning is unavailable.