

HYDRATION

It can make or break performance. Keep your athletes from getting dehydrated, here is what they need to know.

WHAT GOES OUT MUST COME BACK IN

Depending on intensity, athletes can lose between 1 and 4 pounds of water per hour when working out.



Drink 12 fluid ounces of water 30 minutes before working out



Drink water throughout the day to keep hydrated prior to practices or games



Drink water every 20 minutes during the first hour after working out



Replenish electrolytes

THE PERFORMANCE KILLER

Dehydration symptoms to watch out for:

| | | | | | | | | | | |
|----------|----------------------|---------------------------|----------|--|------------|----------------------------------|-------|------------------|--------------------|-----------------------|
| Headache | Dry mouth and thirst | Decreased output of urine | Dry skin | Lightheadedness, dizziness, sleepiness | Exhaustion | Disorientation and lack of focus | Fever | Hyperventilation | Diarrhea, vomiting | Loss of consciousness |
| MILD | | | | | | | | SEVERE | | |

WHAT AND WHEN TO HYDRATE

- ☑ **BEFORE** - Cold water
- ☑ **DURING** - Electrolyte-packed sports drink or water
- ☑ **AFTER** - Chocolate milk or protein shake

DID YOU KNOW?

Painful muscle cramps can be prevented by staying hydrated.



5 HACKS TO PERFORM BETTER IN HEAT

Don't let the heat affect the intensity of your athlete's performance, or worse, lead to something more serious such as heat stroke.



WHAT TO TELL YOUR PLAYERS:



REALIZE WHEN IT'S TIME TO BREAK

If you feel dizzy, weak or exhausted, take 20 and slowly build your intensity back up.

★ PRO TIP:

Want to cool down quickly? Rest in the shade and try placing a cold towel on your head.



WATCH OUT FOR YOURSELF AND YOUR TEAMMATES

HEAT SYNCOPE:

Getting lightheaded or fainting during exercise

HEAT EXHAUSTION:

Inability to continue exercise because of weakness or fatigue

EXTERNAL HEAT STROKE (EHS):

Central nervous system dysfunction and body temperature of more than 104 degrees



IT'S IN WHAT YOU WEAR

Stay cool by wearing loose fitting, light colored clothing and minimize the amount of equipment worn during a workout.

★ PRO TIP:

Get outside conditioning earlier (before 10 a.m.) or later in the day (after 5 p.m.).



SPORTS DRINK VS. H2O

Drink water *before* your workout and sports drink *during* intense exercise.

★ PRO TIP:

When conditioning outside, keep drinks in a cooler so they can be nice and cold for when you need them.



TRAIN EARLY IN THE SEASON

Acclimating to hot temperatures is important if you want to make sure your performance is all-star ready.

★ PRO TIP:

Get out of the air conditioning and into the heat. Slowly build the intensity of your workouts as the summer progresses to get you in prime condition for the start of the season.

HOW TO RECOGNIZE AND TREAT THE VARIOUS EXERTIONAL HEAT ILLNESSES

| | HEAT SYNCOPE | HEAT CRAMPS | HEAT EXHAUSTION |
|----------------|---|--|--|
| RECOGNITION | Refers to a fainting or lightheadedness episode | Painful, localized muscle cramps and may feel like they are “wandering” throughout the cramping muscle Usually visible and the muscle will feel hard | The inability to continue exercise in the heat from either weakness or exhaustion May feel hot, tired, sweating a lot, weak, dizzy and don’t feel able to continue exercise |
| CAUSES | Lack of heat acclimatization and poor fitness Blood pools in the lower extremities, reducing the heart’s ability to provide enough circulation | Combination of fatigue, dehydration and electrolyte losses through sweat Lack of heat acclimatization and poor fitness | Caused by either excessive fluid losses or electrolyte losses Dehydration causes less blood to be available for the working muscles and the skin to give off heat |
| TREATMENT | Lay the athlete on the ground and raise the legs about 12 inches This helps blood go back to the heart to normalize blood pressure | Rehydration with water and sport drinks Some light stretching or massage with ice on the cramping muscle | Remove the athlete from activity and put him or her in a shaded/cool area Lay the athlete on the ground and raise the legs about 12 inches Replenish lost fluids Moderate cooling methods, such as ice towels, misting fans or cold water immersion |
| PREVENTION | Heat acclimatization | Arrive to practice well-hydrated and having consumed some salt with the last meal Minimize fluid losses during exercise and replace lost fluids post exercise Heat acclimatization | Heat acclimatization Arriving to practice/competition well-hydrated Minimizing fluid losses during activity and replace fluid losses after exercise |
| RETURN TO PLAY | The athlete should feel better within a few minutes, and full recovery is usually quick (within hours) Return to activity once the athlete feels better and is adequately hydrated | Once cramps resolve Without replacing lost fluids, risk of additional cramps is high | Should not return to activity on the same day Complete recovery usually takes 24-48 hours and must focus on rehydration and rest |

IMPORTANT

If athletes need to go to the hospital, have them cool off first and transport them second. Rapid cooling onsite while waiting for transport to the hospital is a key to survival of an exertional heat stroke without medical staff.

EXERTIONAL HEAT STROKE (EHS)

What is exertional heat stroke (EHS)?

Exertional heat stroke occurs when the body reaches temperatures above 104°F and there is obvious central nervous system (CNS) dysfunction. CNS dysfunction can include any of the following: dizziness, collapse, confusion, irrational behavior, hysteria, aggressiveness, combativeness, disorientation, seizures and coma. It is a medical emergency.

What is the cause of EHS?

When the body is unable to give off heat fast enough, heat is stored and core body temperature continues to rise.

How do I treat someone suspected of EHS?

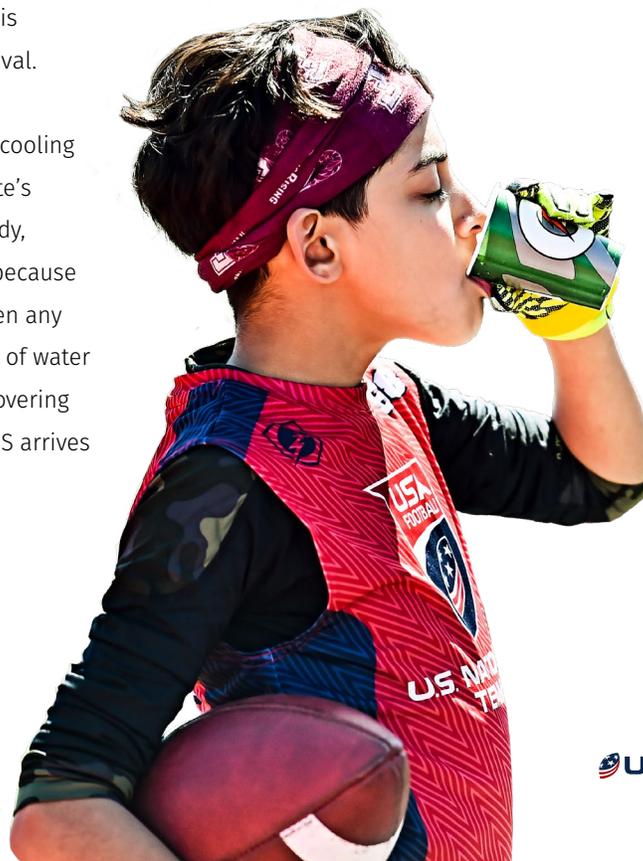
If EHS is suspected in an athlete, immediate action is imperative in order to maximize the chance of survival.

EMS (9-1-1) should be called immediately. Aggressive cooling of the entire body should be done to lower the athlete's core body temperature as fast as possible. Whole-body, cold-water immersion is the best treatment for EHS because it cools the body the fastest. If this is unavailable, then any attempts to cool the body through continual dousing of water (shower, running a hose over the entire body while covering the body with iced towels) should be done before EMS arrives to take the athlete to the hospital.

How do I prevent EHS?

There are multiple ways in which you can help prevent the occurrence of EHS:

- Having your athletes undergo a period of heat acclimatization
- Encouraging athletes to come to practice hydrated
- Allowing athletes unlimited access to hydration during activity
- Modifying practice when environmental conditions become extreme (allowing additional rest/hydration breaks, reducing the intensity of practice, reducing the time of practice and reducing the equipment worn during practice)
- Practicing at an intensity that is appropriate for the fitness level
- Encourage your athletes to speak up when they do not feel well - create a culture where this is considered smart



PRACTICE MODIFICATION



Plan your practices to help acclimate your athletes to the heat.

| AREA OF PRACTICE MODIFICATION | PRACTICES 1-6 | | |
|---|---------------|-------------------------|---|
| | Days 1-2 | Days 3-4 | Practices 5-6 |
| # of Practices Permitted Per Day | 1 | | |
| Equipment | Helmets Only | Helmets & Shoulder Pads | Full Pads (optional) |
| Maximum Duration of Single Practice Session | 90 Minutes | 2 hours | |
| Contact | No Contact | | Full contact drills, maximum of 30 minutes per day (optional) |