

HYDRATION FOR BASEBALL PLAYERS

A Parent's Guide: What Science Says About Hydration and Heat

Written in plain language, with links to the research behind it

Baseball does not look like a running sport, so hydration gets treated as an afterthought. Then a doubleheader in August finds everybody out. This guide covers what dehydration actually does to a young player, checks the common beliefs against current science, and explains the safety steps built into our hydration page.

Why It Matters

The National Federation of State High School Associations (NFHS), the body that governs high school sports, states that losing just 1 to 2 percent of body weight in sweat measurably hurts athletic performance, and that losses of 3 percent or more raise the risk of heat illness. On a 150 pound player, 2 percent is only 3 pounds.

The critical detail for parents: thirst lags. A player does not feel thirsty until performance has already dropped, which is why our approach is built on a schedule and a measured sweat rate, not on "drink when you're thirsty."

Common Beliefs, Checked Against the Science

BELIEF: "If they're thirsty, they'll drink. The body knows."

FACT: Thirst is a late signal. Research behind the American College of Sports Medicine's fluid replacement guidance shows performance declines begin before thirst becomes strong, especially in children and adolescents.

That is why athletic trainers schedule fluids by the clock: roughly 16 oz two hours before activity, 8 to 16 oz shortly before, and 4 to 8 oz every 15 to 20 minutes of play.

BELIEF: "Water is all a young athlete needs."

FACT: Sweat carries sodium as well as water. Published research measures sweat sodium between roughly 460 and 1,840 mg per litre, a fourfold range between individuals. A heavy, salty sweater can drink plenty of water and still cramp.

In the extreme, large volumes of plain water without sodium can dilute blood sodium (hyponatremia). Water plus electrolytes, matched to how salty a player's sweat actually is, is the evidence-based approach.

BELIEF: "Sports drinks are just sugar water. Or: they need the sugar for energy."

FACT: The sodium is the useful part for a baseball game; the sugar is optional. Every product we list is zero sugar, sorted by sodium content so the mix can match the player's measured sweat rate.

Drinks above about 8 percent carbohydrate (regular soda, juice) actually slow how fast fluid empties from the stomach, which is the opposite of what a player needs mid-game.

BELIEF: "Cramps mean the player is out of shape."

FACT: Heat cramping in an otherwise fit player is most often a fluid and sodium problem, not a conditioning problem. It responds to salt and fluids, not to more running.

BELIEF: "An energy drink before the game helps them compete."

FACT: The NFHS specifically recommends against stimulant energy drinks around activity in the heat. Caffeine, heat, and a doubleheader is a genuinely bad combination for a young athlete's heart and temperature regulation.

The Part That Is Bigger Than Performance

Exertional heat stroke is one of the leading causes of death in young athletes, and most of it happens in summer. Get the player out of the sun, get cold water on them, and get the athletic trainer or 911 if you see: confusion or acting "off" · staggering or slurred speech · skin that stops sweating or turns hot and dry · vomiting or severe headache · fainting · whole muscle groups seizing and not releasing. Cooling starts before the ambulance arrives, not after.

Younger athletes acclimatize to heat more slowly than adults and are demonstrably worse at spotting these signs in themselves. Watching for them is a coaching job and a parent job, not a player job.

Our Approach

The hydration page is built around three numbers a family can get for free:

- **A measured sweat rate.** Weigh before practice, weigh after, note what was drunk. Sweat rates differ by more than double between two players on the same field, so we measure rather than guess. One pound lost equals 16 to 20 ounces owed back the same day.
- **A game day timeline.** The NFHS schedule, converted to actual clock times from first pitch, so a player can set phone alarms once.
- **The urine color check.** The no-equipment field test every athletic trainer uses. Pale straw is the target; the darkest shades mean drink now and tell an adult.

Every product listed is zero sugar and sorted by published sodium content. Nothing on the page is required buying. Catchers deserve extra attention: full gear and a squat every pitch make it the position most likely to end a hot day in deficit.

A NOTE ON EXISTING CONDITIONS: Added sodium is appropriate for healthy, heavily sweating athletes. Anyone with a blood pressure, kidney, or heart condition should not add sodium without talking to their doctor first. When in doubt, ask the doctor or the team's athletic trainer.

Bottom Line

Dehydration quietly takes away bat speed, command, and focus before anyone notices, and in the summer heat it can become a genuine medical emergency. The fix is cheap and boring: a measured sweat rate, fluids on a schedule, sodium that matches the sweat, and adults who know the warning signs.

Sources and Further Reading

- NFHS Position Statement and Recommendations for Hydration to Minimize the Risk for Dehydration and Heat Illness: <https://www.nfhs.org/> (Sports Medicine resources)
- American College of Sports Medicine Position Stand: Exercise and Fluid Replacement (NIH/PubMed): <https://pubmed.ncbi.nlm.nih.gov/17277604/>
- Sweating Rate and Sweat Sodium Concentration in Athletes: A Review (NIH/PMC): <https://pmc.ncbi.nlm.nih.gov/articles/PMC5371639/>
- Korey Stringer Institute, University of Connecticut (heat illness prevention): <https://ksi.uconn.edu/>
- CDC Growth Charts (the reference behind our youth safety floors): <https://www.cdc.gov/growthcharts/>

This guide is education, not medical advice. Talk to your player's doctor or athletic trainer before changing fluids, sodium, or supplements, and check league and school rules first.

The calculators behind these numbers and the product picks are at uncommittedu.com/hydration. Free, no account.