

Proper Hydration for Youth Athletes

by dotFIT experts

Fluid Balance is Critical to Health and Performance



Maintaining proper fluid balance is essential for every athlete since small levels of dehydration can negatively impact performance. Not getting enough fluids, high humidity or environmental temperature can interfere with the body's ability to maintain a normal temperature. This can lead to heat-related illness and death. Youth athletes may be at greater risk for dehydration because they do not tolerate heat as efficiently as adults due to immature sweat glands or lower sweating capacity. Children are more prone to heat illness because they absorb heat more readily than adults. Also, the thirst mechanisms of children and adolescents are not fully developed so young athletes typically do not consume enough fluid before and during exercise. Therefore, youth athletes will require more supervision to ensure they follow all fluid recommendations closely and consistently. During most activities, adequate water intake can help prevent dehydration and heat exhaustion. However, during endurance events or activities greater than 60 minutes, a sports drink with carbohydrates provides fuel for the nervous and muscular systems, and may enhance performance. During multiple daily workouts and very long endurance events (e.g. ultra marathon) in which sweat losses are high, carbohydrate and

electrolyte (e.g. sodium, potassium) intake is required.

Important Guidelines for Parents and Coaches

Parents:

- It is imperative that you take the time to ensure your athlete drinks enough fluid before AND after events.
- Two hours before games and practices, give your child a container with 16 to 24 ounces of fluid. Check to make sure they drank the entire container. Follow the post-exercise guidelines below.
- This is especially important when it's hot or humid outside to prevent heat-illness.

Coaches:

- Make it your policy that water be available during practices and within reason. If feasible, allow kids to drink at will. Otherwise take regular water breaks.
- For the very young athlete, assign coaches to make sure every kid is getting water during water breaks.
- Athletes, especially younger ones should be able to drink water every time they request.
- Train every coach and staff member to adhere to this policy.
- Learn the signs and symptoms of dehydration and monitor your athletes closely. These include
 - Thirst
 - Dry mouth/cotton mouth
 - Headaches or lightheadedness
 - Fatigue or weakness
 - Muscle cramps
 - Nausea and vomiting
 - Flushing (red) skin
 - Dry skin (sweating stops)
 - Rapid breathing
 - Increased heart rate
 - Dark yellow (concentrated) urine

General Fluid Requirements

- Fluids should be cold, palatable and selected based on the type and duration of the activity.
- Sports drinks should contain four to eight percent carbohydrate. Drinks greater than 10 percent carbohydrate may slow stomach emptying, cause abdominal cramping and impair performance.
- Drinks with a combination of glucose, glucose polymers and fructose may enhance water absorption.
- Solutions containing primarily fructose can cause an upset stomach and should be avoided. Be sure to check the food label for ingredients.

Pre-exercise Guidelines

- Drink approximately 16 to 24 ounces of fluid two hours before activity.
- On warm or humid days, drink an additional eight to 16 ounces 30 to 60 minutes before activity.
- Water is adequate for activities less than an hour as long as meals are consumed regularly.
- For endurance events, training sessions longer than 60 minutes, or multiple practices a day, choose a sports drink containing four to eight percent carbohydrate (e.g. Gatorade).
- For early morning workouts, a liquid meal replacement can be consumed 10 to 40 minutes before activity because it can be rapidly digested.

During Exercise

- Depending on your sport, consume three to six fluid ounces of water or sports drink every 15 minutes. This equates to approximately 32 ounces per hour.
- For prolonged exercise greater than 4 hours, choose a sports drink with small amounts of electrolytes.

Post-exercise Guidelines

- Immediately following activity, drink at least 16 to 20 ounces of fluid for every pound of weight lost to ensure proper rehydration. Supervise your youth athletes to ensure they drink the entire amount of fluid you provide.
- A liquid shake with high carbohydrate content, minimal protein and fat can refuel energy stores and maximize recovery after demanding training bouts. Consume this as soon as possible after workouts or events. The dotFIT FirstString™ Powder meets the NCAA guidelines and is ideal for youth and college athletes.
- Drink an additional 16 ounces with your post workout meal. This meal should be consumed within two hours after activity.
- Weigh yourself each morning. A stable weight generally indicates proper fluid balance.

References

1. Bar-Or O. Temperature regulation during exercise in children and adolescents. In: Gisolfi CV, Lamb DR, eds. Perspectives in exercise science and sports medicine: youth, exercise, and sport. Carmel, IN: Benchmark Press, 1989:335
2. American Academy of Pediatrics. Climatic heat stress and the exercising child and adolescent. Pediatrics 2000;106:158
3. American College of Sports Medicine, Sawka MN, Burke LM, Eichner ER, Maughan RJ, Montain SJ, Stachenfeld NS. American College of Sports Medicine position stand. Exercise and fluid replacement. Med Sci Sports Exerc. 2007 Feb;39(2):377-90. Review.

The Connecticut Speed School supplies dotFIT products and specifically, FirstString. Contact us for more information at info@ctspeedschool.com or 203-298-4277.



CONNECTICUT SPEED SCHOOL

dotFIT
GROW STRONG.™

NSF
Certified for Sport®

HEALTH & PERFORMANCE

dotFIT PURE PROMISE

WHEY SMOOTHIE
MAXIMIZE ENERGY
ACCELERATE RECOVERY
HYDRATION
SUPPORTS MUSCLE REPAIR

NO7RAGE
STRENGTH
MUSCLE

FIRST STRING
MAXIMIZE ENERGY
RECOVERY
SUPPORTS MUSCLE REPAIR

dotBA

dotBAP

*"If it didn't work
I wouldn't use it...
PERIOD."* --Shaq