American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Ohio Chapter

Sports Shorts

GUIDELINES FOR PEDIATRICIANS

Hydration for Kids

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Why is hydration important for sports?

Proper hydration needs to be part of a young athlete's workout plan. The benefits of a proper hydration plan include:

- Regulation of body temperature and lubrication joints
- Prevention of fatigue, lethargy, muscle cramps, dizziness and heat illness
- Facilitation of transport of nutrients
- Optimizion of muscle recovery and stamina
- Avoidance of gastrointestinal distress

Signs of dehydration include:

- Dry, sticky mouth
- Sleepiness, fatigue, lethargy
- Light-headedness
- Dry skin
- Headache
- Irritability and confusion
- Sunken eyes
- Dizziness

A 2012 study showed that 50-75% of adolescents are dehydrated going into exercise, potentially due to their inability to perceive thirst and to hydrate properly. Dehydration going into exercise is particularly dangerous for athletes in sports which require training and competing in hot and humid climates for long periods of time, as well as sports which require heavy equipment such as hockey and football.

How do I know if an athlete is well hydrated?

Looking at the color of urine is one of the best ways to know if an athlete is well hydrated. The color of urine should be pale yellow (like lemonade). If urine is darker yellow (like apple juice), the athlete should drink in regular intervals to improve hydration status until urine is pale yellow. Observing the color of urine is relevant at any time--before, during, or after exercise.

How much and what type of fluid should a young athlete be consuming during a practice or event?

Assuming they are well-hydrated going into an event, young athletes should consider drinking 3-5 oz of fluid every 15-20 minutes of exercise, or 8-20 oz of fluid for every hour of exercise. Alternatively, giving athletes free access to fluids and allowing them to drink to thirst during exercise is advocated by some to prevent overhydrating. If the practice or event is 1 hour or less, water is usually sufficient. If the practice or event is over 1 hour, sports drinks with a range of types of carbohydrates (maltodextrin, dextrose, fructose, sucrose) and electrolytes should be considered. The sports drink should have a 6-8% carbohydrate solution and include electrolytes such as sodium and potassium. Studies show that during exercise, boys consume more fluid when it is in the form of a sports drink. Therefore, in order to encourage adequate fluid intake a sports drink is potentially advantageous, in addition to the support of replacing calories burned and electrolytes lost from sweat.

How much fluid should be consumed after a practice or event?

It is important to replace all fluids which were lost after exercise. The best method to determine fluid loss is to weigh oneself before and after exercise. For every pound of weight loss (fluid loss) due to exercise, 16-24 oz of fluid should be consumed. If a scale is not available, perform the urine test and drink fluids until urine is restored to light yellow (light lemonade).

What are some methods for proper hydration techniques?

Young athletes should be encouraged to drink water throughout the day every day. In addition to making drinking water part of everyday life, parents should consider hiring a registered dietitian to construct a hydration protocol for their child athlete. The hydration protocol includes time-intervals and amounts of various types of fluid to maintain proper hydration before, during, and after practices and sporting events. In addition, athletes and parents can follow these guidelines:

- Drink 64-80oz of fluid per day: from mostly water, 2-3 glasses of milk, and juice moderately
- Check urine for color: if darker than pale yellow (light lemonade) drink 20+oz every hour until pale yellow urine is restored
- During Practice or Sporting Event:
  - <1 hour: drink 8-20 oz water every hour
  - >1 hour: drink 8-20 oz water and/or sports drink with 6-8% carbohydrate solution and electrolytes
- After Practice or Sporting Event:
  - Drink 16-24 oz of fluid for every pound of weight lost during practice or sporting event
  - If scale unavailable: check color of urine and drink water until pale yellow (light lemonade) color is restored