

Exercise, Hydration, and Sports Drink Use in Scouting

The following is a synopsis from a variety of professional organizations designed to educate Scouts and Scout leaders about hydration and the use of sports drinks during Scouting-related activities.

Introduction and Overview

Appropriate hydration during vigorous exercise is essential to maintain health and assure continued active participation in BSA programs, especially in hot or humid environments. [1]

ENERGY drinks (i.e., drinks that contain caffeine or other stimulants) are never recommended for Scouting-aged children. [2]

It is the recommendation of the BSA Health and Safety Committee that ENERGY drinks not be used by Scouts under any circumstances and that Scout shops and similar BSA-supported retail entities NOT sell these drinks. [2]

Generally, hydration in Scouting-aged youth can be adequately managed by drinking water. [3-10] Sports drinks may have a limited role during Scouting events, but the use of these drinks should generally be discouraged except at relatively specific times and events as described below.

General Considerations Related to Hydration and Activity

Factors Affecting Hydration

Fluid (water) balance in the body is affected by multiple factors including:

- Fitness
- Level and duration of activity
- Ambient heat and humidity
- Mechanisms of rehydration

Generally the more fit a person is, the better that individual is able to tolerate the fluid losses that may occur with exercise. Planning for a known vigorous exercise activity (e.g., a Philmont trek, a 50-mile bike ride in warm weather, etc.) should include a repetitive, intense, and planned training regimen to acclimate the Scout, which will help minimize fluid loss.

Heat and Humidity

Heat and humidity guidelines have been published by the BSA. [1, 11] Generally the risk of dehydration increases significantly when the relative humidity is greater than 45–50 percent and the environmental temperature is above 85–90 degrees. Refer to the heat index graph at

www.scouting.org for exercise limitations and hydration recommendations if these heat and humidity conditions occur. [11]

Signs of Dehydration

Early recognition of the signs of dehydration and methods of maintaining appropriate hydration are important training considerations in active Scouting programming. Signs of dehydration may include: dark (apple juice-colored) urine; decreased frequency or volume of urine; muscle cramps; feeling faint; and other signs of heat exhaustion. (See the *Boy Scout Handbook* or the *First Aid* merit badge pamphlet for additional information.) If any of these signs are present, activity should stop until appropriate hydration is assured. [10]

Mechanisms of Rehydration

Most professional medical organizations recommend water as the primary and best source of fluid for rehydration in Scouting-aged youth. [3, 12, 13] For prolonged, very vigorous exercise and in situations where profuse sweating is present, sports drinks (see below) may be used. The term “prolonged” is generally understood to be periods of very vigorous activity (and sweating) of more than 60–90 minutes. For shorter periods of time, water is the preferred form of hydration.

Sports Drinks: Composition, Considerations, and Issues

SPORTS drinks are understood to be NOT **ENERGY** drinks, which contain stimulants. Sports drinks contain the following general components:

- Water
- Carbohydrates (sugars)
- Electrolytes and minerals
- Flavoring

Water is recognized as the most important part of these drinks. The carbohydrates/sweeteners may make the drinks taste better but are associated with increased calorie consumption and an increased risk of obesity according to the Committee on Nutrition/Council on Sports Medicine and Fitness. [5] Additionally, because the sweeteners and flavoring may contain both sugar and citric acid, there may be a risk of dental caries (cavities) and loss of enamel in young teeth. In vigorously exercising athletes, the carbohydrates contained in sports drinks may increase the level of endurance. No studies have clearly demonstrated similar exercise benefits at the levels of activity seen in Scouting-aged youth. Sports drinks and other sugary drinks should not be used for just drinking or at mealtime.

Specific Recommendations for Hydration Related to Activity, Heat, and Humidity

The BSA has a number of recommendations related to hydration for events occurring in hot, humid conditions (see No. 680-030). [14] Here is a brief summary of these recommendations:

- Development of a site-specific plan, which includes:
 - Written plan development
 - Leader identification, education, and job assignment among and between leaders
 - Risk detection system/methodology
 - Preemptive plan for hydration and heat/sun risk amelioration
 - Warning system if adverse conditions arise
 - Response plan including alternate activities and incremental hydration guidelines depending on heat and humidity conditions
 - Incident reporting system for adverse outcomes

Considerations of Caloric Intake With Sports Drinks

The Centers for Disease Control and Prevention recommend that during heavy exercise in hot weather approximately 24 ounces of water (+/- 8 ounces) be consumed each hour. [4] The caloric density of the most popular sports drinks (e.g., Gatorade) is approximately 75 calories per 12 ounces of fluid. If this CDC-recommended amount of fluid were consumed only as a sports drink, then approximately 800–900 extra calories would be consumed during five to six hours.

Statement on Electrolyte Loss

Sodium and potassium are the electrolytes usually found in sports drinks. The American Academy of Pediatrics clearly states that for most children (of Scouting age) “daily electrolyte requirements are met sufficiently by a healthy balanced diet ... [and] sports drinks offer little to no advantage over plain water.” [5]

Final Recommendations

- **ENERGY** drinks are NEVER recommended for Scouting-aged youth.
- Water alone is the preferable hydration fluid in virtually all Scouting situations.
- Limit sugars (and thus sports drinks) in routine use.
- **SPORTS** drinks may have limited benefit for athletes but only during prolonged and vigorous sporting activities.

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