



NUMBERS VERSUS REALITY

Some of us are numbers people – we want to calculate exactly what our athletes should consume. Others of us want to know the science behind a recommendation, but don't want to crunch the numbers. This document gives the science-based sports nutrition recommendations for team sport athletes with a performance goal, the translation for how those numbers can be applied and products that can be used to help meet the recommendation.

The Timing	The Numbers	The Practical Application
1-4 hours pre-training or competition	1-4 g/kg carbohydrate 5-10 mL/kg fluid (2-4 hours prior)	Many team sport athletes are limited by set pre-game meal times or practice scheduling in relation to classes. Make sure this meal/snack is mostly carbohydrate and low in fiber, protein and fat (especially closer to the start of exercise). Advise athletes to drink fluids throughout the day so their urine color is light yellow before they start.
Within 1 hour pre-training or competition	Begin meeting “during” needs, ~25-30g	This is a good practice if athletes are hungry or can't/won't eat carbohydrate during exercise. Look for a small amount of easily digested carbohydrate to help avoid stomach upset.
During training or competition	30-60 g/hours carbohydrate for training or competition lasting > 1 h Fluid with sodium based on sweat rate for training or competition lasting >1 hour	The easiest way to address this need is to provide sports drinks and encourage the athlete to drink during breaks. Solid or semi-solid carbohydrates are appropriate if the athlete prefers to drink water. During games, halftime is a good opportunity to use solid forms. To determine athlete's unique sweat rate, use the GSSI Sweat Rate Calculator .
Shortly following training or competition	1.0-1.2 g/kg carbohydrate (if recovery time is less than 8 hours) 0.25-0.30 g/kg protein 20-24 oz. of fluid with sodium per pound body weight lost	Help athletes plan ahead or provide recovery nutrition in the locker room. Products like protein shakes and bars, consumed with water, are a convenient way to get enough nutrients to start the recovery process in the locker room. Since some athletes aren't hungry right after exercise, shakes are often a “stomach-friendly” way to meet this recommendation.

Thomas DT, Erdman KA, Burke LM. American College of Sports Medicine, Academy of Nutrition and Dietetics, Dietitians of Canada (2016) Joint Position Statement: Nutrition and Athletic Performance. Med Sci Sports Exerc. 48(3):543-568.

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