



SANFORD SPORTS SCIENCE INSTITUTE

NUTRITION & HYDRATION FOR TEAM SPORT ATHLETES

Team sports such as soccer, hockey and basketball rely on high-intensity, short bursts of activity, as well as cardiovascular endurance. With any of these sports, nutrition and hydration play a significant role in helping you to perform at an optimal level. Fueling and hydrating for performance before, during and after training and competition will help provide enough energy for the activity, maintain fluid and electrolyte balance, replenish glycogen stores and repair muscle for the next workout or game.

Carbohydrates are the main source of energy for team sports. Athletes who do not consume enough carbohydrates and are insufficiently hydrated will be unable to train and/or compete at high intensities, and will likely experience premature fatigue.

PRE-ACTIVITY

Pre-activity nutrition is divided into two main time frames, based on when practice and/or games are scheduled:

PRE-ACTIVITY MEAL (3-4 HOURS BEFORE):

- 200-300 grams of carbohydrate
- High in lean protein
- Low in fiber and fat
- 12-20 fl. oz. (e.g., milk, juice, sports drink)

Example: Grilled chicken, brown rice, corn, green beans, salad and vanilla pudding.

PRE-ACTIVITY SNACK (30-60 MINUTES BEFORE):

- 30-60 grams of easily digestible carbohydrate
- Moderate in protein
- Low in fiber and fat
- 5-16 fl. oz. (e.g., water, sports drink)

Example: Banana and peanut butter, yogurt and small amounts of granola, cereal and milk, granola bar, etc.

Note: If participating in multiple matches or training sessions on the same day, a sports beverage and/or pre-activity snack are recommended between activities to help provide enough energy for the latter bout(s) as well as replenish some of the fluid and electrolytes lost via sweating in the earlier session(s).

DURING TRAINING OR COMPETITION

Effective nutrition and hydration strategies during workouts and/or games depend on how long each session lasts, the environmental conditions, and whether you are training or competing just once or multiple times on the same day.

It takes 60-90 minutes of high-intensity activity to become almost completely depleted of your glycogen stores. If the activity is going to be less than 60-90 minutes (and you are well-nourished beforehand), focus on water. If the activity is more than 90 minutes and/or you have multiple practices or competitions a day, a sports drink can play a more important and effective role. This will help with replenishing glycogen, as well as any sodium losses:

DURING ACTIVITY

- Drink 5-10 oz. of fluid every 15-20 minutes
- Consume 30-60 grams of carbohydrates every hour
- During half-time (or similar break), eat a simple carbohydrate snack with limited amount of protein, low in fiber and fat
- Consume snacks that contain sodium (salt)

Example: Banana, pretzels, crackers, beef jerky and/or a sports drink.



RECOVERY

Nutrition post-workout or game/match is also very important, because it promotes recovery by replenishing glycogen stores and helping repair muscle damage.

Recovery starts fairly close to when you finish your activity; therefore, within about 30-45 minutes, focus on protein and carbohydrate foods and/or drinks. Consume a ratio of 1:3 or 1:4 of protein to carbohydrate.

Example: Chocolate milk, Greek yogurt and a banana, recovery shake.

POST-ACTIVITY MEAL (1-2 HOURS AFTER)

- High in whole grain carbohydrates
- High in lean protein
- Good amount of fiber and fats
- 16-24 fl. oz. (e.g. chocolate milk, smoothie, sports drink, water)

Example: 6-12 in. sandwich with turkey, cheese & vegetables, trail mix, and oatmeal cookie.

HYDRATION AND SWEAT RATE

A sweat loss of more than 2 percent of your pre-activity, normally hydrated body weight has been shown to negatively affect your athletic performance, and more so in a hot and humid environment. Use the following strategies to avoid significant dehydration:

- If you are thirsty, you are probably already somewhat dehydrated. Minimize pre-activity body water deficits by drinking regularly throughout the day.
- Check the color of your urine. A darker color, similar to apple juice, signifies you are dehydrated. A color more close to lemonade means you are properly hydrated.

- Determine your sweat rate by weighing yourself before and after a training session and competition on different days in different environments to get an average rate of sweat loss for various conditions. The difference in body weight divided by time will give you an estimate of sweating rate.

Example: If you lost three pounds in 90 minutes (1.5 hours) while training on a hot summer day, you can estimate a sweat rate of two pounds an hour.

- After activity, for every one pound lost, drink 16-20 ounces of fluids before the next bout, unless you only have a short recovery time.
- If you are a heavy sweater, incorporate salty snacks into your diet, as the salt encourages you to drink and helps to distribute and retain ingested water.

BOTTOM LINE

- Make sure you come to practice properly hydrated by consuming fluids regularly throughout the day.
- Focus on fueling appropriately for your sport. Timing matters!
- In order to meet your energy and nutrient needs, eat every three to four hours.
- Include a variety of foods in your daily diet. Incorporate whole grains, lean meats, and fruits and vegetables in most meals.
- Make sure to try out new food/drink options in practices/workouts – not on game day. This helps you determine what choices work best for you and what your body is able to tolerate, without undue risk to your game-day performance.
- **The right nutrition and hydration plan can be a game changer!**

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