

# FOODS AND FLUIDS FOR FOOTBALL



To maximize performance, football players must train their bodies for speed, power, and strength – and their minds for focus. To train and compete successfully, athletes must also keep their bodies well fueled with the right foods and fluids.

## Fluids: Staying Hydrated

Water is a key component of the working body, making up 60 to 65 percent of total body weight.

- If athletes lose too much fluid in sweat without replacing what they've lost in both fluids and important electrolytes (like sodium and potassium), they risk becoming dehydrated.
- Dehydration can diminish energy and impair performance. Even a 2-percent loss of body weight through sweat (i.e., 3 pounds for a 150-pound player)<sup>1,2</sup> can put athletes at a disadvantage. Some football players, however, lose more than a gallon of sweat during a practice, game, event or workout, especially in hot weather.

## Not all beverages are created equally

Here's how they stack up:

Ingredients per 8 oz	Carbohydrate (grams)	Calories (kcal)	Sodium (milligrams)	Potassium (milligrams)	Carbonation
Gatorade®	14	50	110	30	No
Water	0	0	0	0	No
Powerade®	19	70	55	30	No
Capri Sun® Sport™	23	83	59	36	No
Orange Juice	26	112	3	496	No
2% Milk	12	122	122	376	No

Nutritional information provided by USDA database and manufacturer's label

\*Powerade is a registered trademark of the Coca-Cola Company.

\*Capri Sun Sport is a registered trademark of Rudolf Wild GmbH & Co. KG

## How to maintain peak performance

Football players, especially those who train exceptionally hard during 2-a-days and generate extra heat from wearing heavy uniforms and equipment, can stay hydrated by:

- **Remember fluids throughout the day.** This may be as simple as grabbing a sports drink first thing in the morning, then using fountains, coolers, and cafeteria beverages as triggers for drinking throughout the day.
- **Hydrate 2 to 3 hours before practices, games, and events.** Athletes should aim for at least 16 ounces (2 cups) of fluid at this time and an additional 8 ounces (1 cup) 10 to 20 minutes prior to getting on the field.
- **Drink at regular intervals** (15-20 minutes) during workouts or games. Sports drinks like Gatorade® can help ward off dehydration and muscle cramping because they help replenish electrolytes (i.e., sodium and potassium) lost in sweat without overdrinking.

## Athletes should know their sweat rates.

Since sweat rates can vary based on the individual, weather, and intensity of exercise, athletes should measure:

How much weight they lose during exercise (in ounces)  
 +  
 How much fluid they consume during exercise (in fluid ounces)  
 =  
 The amount they SHOULD drink to replace sweat losses



**Foods & Fluids Series, Volume I, FOOTBALL** is one in a series of six sports science articles written by Susan Kundrat, M.S., R.D., L.D., an expert in sports nutrition. Any of these articles can be reproduced for educational purposes to distribute to athletes, students, parents or to post in the athletic training room, locker room, or weight room.

## Foods: Pre-Workout Fuel

Athletes should fuel their bodies 2 to 3 hours before practices, events, and games with a high-carbohydrate meal or snack (see “Pre-Workout Meal Ideas”). This will give their bodies enough energy to make it through the workout.

To do this:

- Team leaders can organize pre-game meals for the whole team, including high-energy foods like breads, bagels, cereals, pasta, potatoes, rice, fruits, fruit juices, and vegetables – as well as lean sources of protein.
- Athletes should fill 2/3 of their plates with high-carbohydrate options for quick energy – and the rest with grilled skinless chicken breast, turkey, or lean roast beef to build and help repair muscles.
- Athletes should also salt food to replace the sodium they lose during sweating – especially if they’re heavy crampers.
- Athletes shouldn’t leave the house empty-handed. They should take easy-to-pack snacks like sports bars, sports drinks, fruit juices, trail mix, etc.



## Foods: Post-Workout Fuel

Athletes burn a lot of calories during a workout. Their bodies’ muscles lose the energy that’s been stored for exercise. That’s why it’s important athletes:

- Get energy back to the muscles as quickly as possible (within 30 minutes and again within 2 hours) to help rebuild muscle energy stores for the next workout.
- Have snacks like cereal mixed with peanuts and raisins, a high-energy beverage, or a bottle of 100 percent fruit juice handy to refuel fast.
- Consume another meal within 2 hours to continue storing energy in the muscles.
- When looking to gain lean muscle mass, add 500 to 1,000 additional calories per day combined with proper nutrition and a solid strength-training program.

## Pre-Workout Meal Ideas

Menu #1	Menu #2	Menu #3
Spaghetti with meat sauce	Turkey/veggie sandwich on whole grain bread	Grilled chicken breast
Italian bread	Fresh fruit salad	Mashed potatoes
Salad with lowfat dressing	Oatmeal cookies	Green beans
Fruit juice	Sports drink	Applesauce
		Skim milk

## Sample Plan for Football

Meal	Sample Menu
Breakfast	Scrambled eggs and toast Cereal and lowfat milk Banana Orange juice
Lunch	Ham sandwich with veggies Corn chips Grapes Frozen yogurt Apple juice
Pre-practice/ pre-game snack	Gatorade® Energy Bar Granola bar Apple Gatorade®
During practices/games	Gatorade® Water
Post-practice/ post-game snack	Peanut butter sandwich Gatorade®
Evening meal	Roast beef Baked potato Salad /dressing Steamed broccoli Fruit salad Lowfat milk
Evening snack	High-energy shake with ice cream, strawberries, and milk

<sup>1</sup> Gisolfi, C.V. and D.R. Lamb. *Perspectives in Exercise Science and Sports Medicine: Fluid Homeostasis During Exercise*, Chapt 1 pp. 1-38, 1990.

<sup>2</sup> Gopinathan, P.M. et al. *Arch Environ Health*, 43:15-17, 1998.