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## Fueling Basketball Players

Basketball is a team sport that requires strength, power, endurance, speed, agility, and coordination. Though only about 6 minutes of a 40-minute game are played with high intensity, endurance is very important to all the movements in a game. Analysis of a basketball game shows that players average almost 1,000 movement changes during a game, or about 1 change every 2 seconds. A basketball player runs about 3 miles in a typical game.

Basketball players have a long preseason and a regular season of 25 to 30 games followed by tournament play. Basketball practice includes training and conditioning, drills, and simulated games. A typical basketball player trains 2 to 3 hours a day, 4 to 6 days a week, making basketball a high-calorie-burning sport.

Develop a nutritional game plan to meet the demands of the sport and fuel you through a long season. Good nutrition may not make an average player a great player, but poor nutrition can make a great player average.

USA Basketball is the national governing body for US basketball players ([www.usab.com](http://www.usab.com)).

## Fueling Strategies

Calorie needs of basketball players vary, but on average, women need 3,500 calories and men need 4,600 calories each day. Height is one factor that determines calorie needs. Tall players require more calories than shorter players. Starters and those who get a lot of playing time need more calories than substitutes.

The nutrients that provide energy (calories) are carbohydrate, protein, and fat. The amounts of each nutrient you need to fuel your practice and competition are given below.

### Carbohydrate

Carbohydrate should make up most of your diet. During intense training periods, when practicing or playing for 1 to 3 hours each day, eat 2.7 to 4.5 grams of carbohydrate per pound of body weight per day (6 to 10 grams per kilogram). For example, a 190-pound basketball player would need 513 to 855 grams of carbohydrate a day. On less intense training days or when sidelined by injury, you only need 1.4 to 2.3 grams of carbohydrate per pound (3 to 5 grams per kilogram).

These foods have **15 grams** of **carbohydrate**:

- 1 slice bread
- 1 6-inch tortilla
- ½ cup corn
- ½ cup mashed potatoes
- ½ medium baked or sweet potato
- ⅓ cup rice
- 3 cups popcorn
- 1 small apple
- 15 grapes
- 2 tangerines
- 2 tablespoons raisins
- ½ cup orange juice
- 3 cups green beans
- 1¼ cups milk or yogurt

Choose high-quality carbohydrate foods such as whole grain breads and cereals, rice, pasta, starchy vegetables, whole or dried fruit, and low-fat milk and yogurt. Eat fewer refined carbohydrates and sweets such as pastries, cookies, cakes, candy, sugar-sweetened soft drinks, fruit drinks, tea, and specialty coffee drinks.

These foods have  
**7 grams** of **protein**:

- 1 ounce cheese
- 1 ounce beef, pork, chicken, or turkey
- ¼ cup cottage cheese
- ½ cup black beans or kidney beans
- 1 whole egg
- 2 tablespoons peanut butter
- 1 cup milk or plain yogurt

## Protein

Protein provides the building blocks for muscle mass and for healthy growth and development. You need 0.6 to 0.8 grams per pound (1.4 to 1.7 grams per kilogram). For example, a 190-pound basketball player would need 114 to 152 grams of protein a day. Eating more protein than the recommended amount will not build muscle faster or add extra muscle mass.

Choose lean protein foods such as lean beef and pork, chicken and turkey, eggs, and low-fat dairy foods. Nuts are a good source of protein and contain healthy fats. Eat fewer high-fat protein foods such as regular burgers, brisket, ribs, sausage, and full-fat cheeses and dairy foods.

## Fats

There is no specific recommendation for fat for basketball players, but healthy fats should be a part of every athlete's diet. Healthy fats include olives and olive oil, nuts and nut butters, avocado, and vegetable oil (such as canola oil). Fat has more calories than carbohydrate or protein so healthy fats can help add calories for athletes who want to gain weight.

## What Should Basketball Players Eat Before and After a Workout?

When possible, eat 3 to 4 hours before a hard practice or competition. Aim for a low-fat meal with about 200 to 300 grams of carbohydrate and about 30 grams of lean protein. This will ensure you have enough fuel on board but will leave time for your stomach to empty before you take the court. A turkey sub sandwich with baked chips and a side of fruit or a grilled chicken wrap on a flour tortilla with pretzels and fruit juice or low-fat milk are examples of meals that will meet the energy demands of a long practice or competition.

If there is not enough time to eat 3 to 4 hours before practice or competition, eat a snack 1 to 2 hours before exercise. Good choices include juice, fruit, milk, granola or cereal bars, small bagel with peanut butter, cheese and crackers, bowl of cereal, or yogurt. If there is less than 1 hour before exercise, liquids, such as a sports drink or a low-fat liquid meal replacement, may be the best choice.

For practices longer than 1 hour or during tournaments when you may play back-to-back games, pack portable snacks and make the most of postgame meals to recover for the next day's game. Try to eat 30 to 60 grams of carbohydrate every hour. Good choices for snacks include sports drinks, which provide carbohydrate, fluid, sodium, and potassium; peanut butter sandwiches; pretzels; string cheese; trail mix; dried fruit; orange slices; baked chips; smoothies; or 100% fruit juice.

After practice, recover with a carbohydrate- and protein-rich snack. Carbohydrate replaces muscle glycogen (carbohydrate stored in muscles) that was lost during a long practice or competition, and protein stimulates muscle protein repair. Good choices include a turkey or grilled chicken sandwich, a slice of vegetable-cheese pizza, low-fat chocolate milk, cottage cheese and fruit, or cheese and crackers. If you are practicing or competing again the same day or the next day, start your recovery within 30 minutes after training. If the following day will be a rest day, add recovery foods to your next meal.

## **Vitamins and Minerals**

Basketball players can get all the vitamins and minerals they need by making healthy food choices and eating a variety of foods. Have at least 5 servings of fruits and vegetables each day. Adding berries to breakfast cereal, dried fruit to trail mix, frozen fruit to plain or vanilla yogurt, side salads with meals, vegetables on sandwiches, and salsa on baked potatoes and snacking on fresh fruits and vegetables will help you get all the nutrients you need.

Female basketball players should pay extra attention to choosing iron-rich and calcium-rich foods. These nutrients are needed in larger amounts, especially during teen years. Lean beef in a stir-fry, dark-meat chicken or turkey, kidney beans and black beans, and breakfast cereals fortified with iron are good choices. For calcium, choose low-fat milk (cow's milk or soy, rice, or almond milk), low-fat cheese, yogurt, almonds, leafy green vegetables, orange juice with added calcium, or smoothies made with milk or yogurt.

## **Hydration Strategies: What Should Basketball Players Drink?**

Playing basketball is hard, sweaty work, especially when playing in a warm arena or outdoors in the summer months. Losing just 2% of your body weight can impair performance. That equals a 3½- to 4-pound loss in a 190-pound basketball player.

Water is best for most athletes. Plan to drink about 2 cups (16 ounces) of water 2 to 3 hours before a practice or game. Then drink 1 cup (8 ounces) of water 10 to 20 minutes before hitting the court. Most workouts are long and strenuous, so drink about 1 cup of fluid every 10 to 20 minutes during your workout. Keep a sports bottle filled with water at the bench so it is easy to reach.

Sports drinks are a good choice when you have long, hard workouts or if you sweat heavily. Stick to the basic tried-and-true sports drinks such as Gatorade or PowerAde, because they provide a good balance of carbohydrate, sodium, and potassium to replace losses. Follow the same drinking schedule as for water, but also listen to your body. Drink when you are thirsty and monitor how much you urinate and the color of your urine. If you are urinating frequently throughout the day and your urine is a light-straw color, you are probably drinking enough fluids.

**Notes:**

## Frequently Asked Questions

### **I get stale as the season goes on and lose my energy at the end of the season. Could my eating habits be the cause?**

Basketball seasons are long and intense. Fueling your body with enough carbohydrate, protein to repair and build muscle, and healthy fats could be the key to preventing staleness as the season goes on. Try to eat before and after every workout and pack snacks so you always have something to eat for pre-workout fuel or post-workout recovery.

Before a morning workout, try eating a hard-boiled egg and whole grain toast, oatmeal with dried fruit and nuts, or egg and ham sandwich on a toasted English muffin.

Low-fat chocolate milk has been shown to be a good recovery drink. You can also eat a carbohydrate- and protein-rich meal, such as a turkey wrap, chicken sandwich, peanut butter and jelly sandwich, or roast beef sandwich with 16 ounces of water, sports drink, or 100% fruit or vegetable juice.

### **My jersey is soaked with sweat after a practice or game and salt rings are visible on my shirt and shorts when they dry. Should I be eating more salt?**

Athletes who are heavy and salty sweaters need to replace both fluid and sodium lost in sweat. Sports drinks provide both fluid and sodium, and some athletes prefer an endurance-type formula that contains more sodium than the typical sports drinks. Some basketball players who are prone to cramps add packets of electrolytes to sports drinks to boost the amount of sodium. You can also add more salt to your diet by choosing salty foods such as soup, pretzels, baked chips, pickles, olives, salted nuts, and tomato juice.

### **What are some good resources for nutrition and basketball?**

The best resource is a registered dietitian nutritionist, especially one who specializes in sports nutrition.

To find a qualified sports dietitian, connect to the website of Sports, Cardiovascular, and Wellness Nutrition (SCAN) ([www.scandpg.org](http://www.scandpg.org)) and use the “Find a SCAN RD” search box. SCAN also has free sports nutrition fact sheets on a wide range of topics at [www.scandpg.org/sports-nutrition/sports-nutrition-fact-sheets](http://www.scandpg.org/sports-nutrition/sports-nutrition-fact-sheets).

For online resources, check out the United States Olympic Committee’s sports nutrition resources at [www.teamusa.org/About-the-USOC/Athlete-Development/Sport-Performance/Nutrition](http://www.teamusa.org/About-the-USOC/Athlete-Development/Sport-Performance/Nutrition). You will find many resources there, including videos, recipes, and eating guidelines for athletes.