



“I’ve been training hard this offseason and am stronger and faster than last year. But now that practice has started again, I can’t seem to find my ‘fast’ gear when we’re playing full court and I don’t feel quick on ‘D.’ I’ve switched to drinking water mainly, but my legs still feel heavy out there. Is there something else I should eat or drink?”

# NUTRITION

## FOR THE BASKETBALL STUDENT-ATHLETE

PHOTOS FROM NCAA PHOTOS ARCHIVE AND SHUTTERSTOCK

**T**he combination of speed, power, agility and endurance, coupled with technical skill and mental stamina, make basketball a highly intense sport. The game consists of frequent bouts of stop-and-go activity and changes of direction. Even though the average possession or play segment may last about 12 to 20 seconds, players have been found to cover up to five miles in one game.

Game analyses have shown that basketball players make up to 1,000 changes in movement during a game, occurring, on average, every two seconds. These endurance and agility demands require the body to produce large amounts

of energy. Managing carbohydrate energy intake, establishing consistent hydration habits and maintaining body weight are all key nutrition priorities to maximize training outcomes, game-time performance and season-long durability.

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## PRESEASON

Given the various demands of the preseason, the day-to-day variability can be a challenge. This is an important time to create good eating habits that will carry over into the season.

**Fueling needs.** First, establish an eating schedule that works with your daily class and practice schedules. Skipping meals will take its toll and zap your energy and performance. Breakfast or a morning snack before early workouts is an important meal, because most people use up most of their liver carbohydrate stores during the night while sleeping. Refilling these stores will help ensure that your body doesn't borrow too much muscle energy throughout the day, saving it for practice.

**Hydration needs.** Practice meeting your daily fluid requirements and also get to know your sweat rate during the preseason. The goal is to start practice well hydrated, drink enough during workouts to prevent a 2 percent body water deficit, and adequately replace fluid losses afterward. Carry a bottle with you to keep fluids available throughout the day. You can refill your bottle as needed between meals, while monitoring your hydration status throughout the day. Other fluid recommendations:

- Drink four to eight ounces of fluid every 15 to 20 minutes during workouts — an easy reference is that each 'gulp' is about one ounce of fluid for most people. Example: During a two-hour practice, aim to drink about 32 to 64 ounces.
- Estimate your sweat rate by weighing yourself before and after practice and determining how much weight you lost. Drink 16 ounces of fluid for every pound lost. If you lost 2 percent or more of your total body weight during practice, you should drink more during practice next time (ask your athletic trainer to help you monitor your sweat rate).
- Aim for a beverage with sodium to help replace sweat sodium losses, stimulate thirst and retain the fluids.

Learning your needs and practicing fueling strategies will train your body to take in what it needs and allow you to focus on your game once the season starts.

## COMPETITION

The season is long and intense. October to March can be a mental and physical grind with practice, strength training, film review and transitioning academically from the fall to spring semester.

Game-day fueling now comes into the picture. Many teams arrange a pregame meal three or four hours before tipoff. This is an important meal that should provide plenty of carbohydrates. Foods such as breads, potatoes, rice, pastas and fruits,

## RECOMMENDED EATING SCHEDULE

7 a.m.	Breakfast
10 a.m.	Mid-morning snack
Noon	Lunch
1:30 p.m.	Pre-practice snack
2:30 p.m.	Practice
3:30 p.m.	Rehydrate, strength and conditioning
5 p.m.	Recovery shake or snack
6 p.m.	Dinner
9:30 p.m.	Evening snack



## TIPS FOR DINING OUT

Order This	Limit That
Baked	Fried
Grilled	Crispy
Steamed	Stuffed
Broiled	Creamy
Roasted	Super-sized



and starchy vegetables such as carrots, corn and peas, are all great for building your pregame meal. Balance the rest of your plate with lean, low-fat proteins and low-fat dairy. Don't forget to include fluids with your meal to begin hydrating for the game. At least two cups (16 ounces) of water, sports drink or 100 percent juice are good choices. If you're prone to muscle cramps, add salt to your foods and eat salty foods such as pretzels, soups, crackers and condiments such as soy sauce and ketchup.

**Game day fueling.** Frequent substitutions, timeouts, media breaks and halftime all offer great opportunities to refuel and hydrate. One of your fiercest opponents is fatigue. Your performance nutrition plan aims to reduce both mental and physical fatigue during games. Keep this in mind:

- Players who play a lot of minutes should consume small portions of solid food at halftime to reload energy for the second half.
- To maintain performance, 30 to 60 grams of carbohydrate per hour is recommended. Some good options are sports drinks, energy bars, orange wedges, fig bars, and sport gels or chews.
- Consume what worked best for you

during the preseason, or experiment with different strategies during practice so you know what your 'go-to' energy sources are during the game.

- Use breaks in the game to hydrate intentionally. Research shows that players who do not make a conscious effort to replenish fluids often end up dehydrated.

## CHAMPIONSHIP

Nutrition recovery is a high priority during this period to avoid energy depletion and stale legs. Consuming about 0.5 grams of carbohydrate per pound of body weight (or half your body weight in grams) and about 20 grams of protein immediately after practice and games can help regenerate muscle energy stores and help prevent muscle breakdown. Hydration continues to be a daily priority during this time to prevent the cumulative effect of dehydration during consecutive days of play and travel.

### Postseason Carbohydrate Needs

Body Weight	Carbohydrate (grams)
130 lbs.	65 g
160 lbs.	80 g
190 lbs.	95 g
220 lbs.	110 g
250 lbs.	125 g

## OFFSEASON

The offseason is a time to focus on your individual progress and any body composition changes that may be necessary. Strength, power and speed development again become the center of training. Muscle mass is determined by the balance of protein synthesis and breakdown. An under-fueled or fasted athlete cannot build muscle mass or size, so nutrition remains important during the offseason.

Maintaining a regular eating schedule and consuming high-quality, lean proteins will aid in your offseason outcomes. Because meal plans and training tables may not be as available as during the academic year, this is often a time to put more attention to planning, shopping and preparing your own meals and snacks, and making smart choices when eating out. Fire up the grill, search for quick and easy recipes, shop for groceries at least once a week, and invite friends and teammates to join in!

## CARBOHYDRATE ENERGY

Carbs are the dominant fuel source when you're practicing at high intensities and for sprinting and jumping. If you're playing at full speed, you're already burning up carbohydrate energy. If you



# Keys to the game

suddenly need to burst into a sprint, your body will require even more carbohydrates in that moment.

The body can store carbohydrates from the foods we eat in the muscles and liver, called glycogen. When muscle glycogen stores are full, we have about 90 minutes worth of high-intensity fuel. Once these supplies are emptied, you can get that feeling of ‘heavy legs’ and fatigue. Quality sources of carbohydrate mainly come from fruits, vegetables, grains and dairy. Given the importance of this energy source, it’s wise to avoid the low-carb diet crazes that limit carbohydrate intake.

## HYDRATION HABITS

The second key is to develop consistent hydration habits each day before, during and after practice and games. Dehydration can happen before you even realize the effects. Symptoms such as thirst, fatigue, headaches and muscle cramps are often felt after it’s too late. Sweat losses can be substantial, especially during a two-hour or longer practice session or game. If your fluid intake is less than your sweat losses, dehydration occurs.

Dehydration can:

- Slow down sprinting and lateral movements;
- Lower a player’s shooting percentage and decrease total shots made; and
- Affect a player’s balance, reaction time and mental readiness.

Because adequate hydration is key to your basketball skills, it’s important to monitor your hydration levels by drinking enough to prevent thirst and watching the color of your urine. Light-colored, odorless urine is a sign of adequate hydration. Strong-odor, dark-colored urine means you may need to focus more on your fluid intake. [To learn more, read the Performance Hydration fact sheet.](#)

## TARGET PLAYING WEIGHT

For many basketball players, keeping weight stable and not losing muscle through the long season can be challenging. Body-weight changes from week to week can give you an indication as to whether you are getting enough energy and eating enough. A loss

in total body weight may be a symptom of under-fueling, showing that your body is in an energy deficit. The goal here is to develop a structured eating schedule that includes enough food throughout the day to achieve and stay close to your target playing weight.

**NCAA** A FACT SHEET FOR STUDENT-ATHLETES

### ASSESS YOUR HYDRATION STATUS

**Step 1:** Match the color of your urine to a color on the chart.

**Step 2:** Determine your level of hydration to dehydration. The lower the number, the better the result.

**Step 3:** If your urine color matches:

1	• Nos. 1, 2 or 3, you are hydrated.
2	• Nos. 4, 5 or 6, you are mildly to moderately dehydrated.
3	• No. 7 or darker, you are dehydrated.
4	• Athletes should consume water throughout the day. Do not wait until you are thirsty.
5	• To avoid dehydration, consume water and/or sports drinks before, during and after workouts or exercises. Be cautious of “energy drinks.”
6	• In general, 20 ounces of fluid should be replaced for every pound lost during that exercise session.
7	• Certain foods, medicines and vitamins may cause the color of urine to change. If these have been consumed in large amounts, this chart may be unreliable. Report all medicines, vitamins and supplements to your sports medicine staff.
8	• Report any symptoms of heat illness or general medical illness to your sports medicine staff as soon as possible.

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References:  
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