

Fueling the Fastbreak: Basketball Nutrition

A look at performance nutrition keys for basketball.

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The combination of endurance, speed, power, agility, sport specific skill and mental focus make the game of basketball a highly intense sport. By incorporating sound performance nutrition principles to these components of the game players can maximize their training and competitive abilities. As a basketball player, one of our most fierce opponents is fatigue. Therefore, one of the goals of performance nutrition is to reduce both physical and mental fatigue. Delaying fatigue not only gives us an advantage over our competitors but it also helps to prevent injury. Many injuries occur in the last few minutes of the games when players are physically drained and mentally tired. So, maintaining high energy levels throughout game and practice give a player a distinct competitive edge.

The two performance nutrition keys for basketball are minimizing carbohydrate depletion and staying adequately hydrated. Carbohydrate is the primary fuel source in basketball due to the stop and go nature of the game. Once carbohydrate supplies in the body become depleted we experience fatigue evident by decreased speed, quickness, reaction time and declining endurance, decision making abilities, and mental focus. Therefore showing up to games and practices fully fueled with adequate carbohydrate and consistently replenishing these stores is a performance priority. Carbohydrates can come from many different foods, but quality sources mainly come from the fruit, vegetable, and grain food groups. Some examples of good carbohydrate foods are bananas, oranges, dried fruits, carrots, peas, pastas, baked potatoes, whole grain breads, granola bars, and pretzels. Given the importance of carbohydrate in the game of basketball, players should be sure to avoid the low-carb crazes and specialty products designed to limit carbohydrate intake.

The second key in basketball is maintaining adequate hydration before, during, and after practices and games. Dehydration can happen to a player before he/she realizes the effects. Symptoms such as thirst, fatigue, headaches, and muscle cramps are often felt after it's too late. One way to monitor hydration levels and prevent poor performance from dehydration is to check the color of your urine. Light-colored, clear, odorless urine throughout the day means a player is probably well hydrated. Strong, dark urine may suggest dehydration and indicate that players should begin drinking water and sports drinks until well hydrated. Fluid losses of only 1-2% of body weight can negatively effect performance and cause dehydration. Many athletes can easily lose this much fluid in an hour of exercise. Since research shows that most athletes do not fully rehydrate during practices and games and many show up to the court already dehydrated, steps should be taken to help prevent these detrimental effects. Coaches and players should learn the importance of proper hydration and incorporate hydration strategies into every practice and game situation. This will help "train" players to drink enough. Many players may find it difficult to ingest the recommended fluid volumes, so it is important for players to know that they must train their bodies to drink adequate amounts. Coaches and team parents can further support these efforts by making sure each player has his/her own individual bottle for water or sports drinks for both practices and games.

Pre-Practice/Game Meals

The pre-practice or pre-game meal is an important component of preparing for competition. This meal provides energy and fluids to the working muscles and can also help mentally prepare a player for the big game. A meal can be eaten 2-4 hours prior to practice or games. The further the meal is from the tip-off the larger the meal should be and the more lean protein it should contain. Conversely, the closer the meal is, the smaller the meal should be. In either case we know that carbohydrates from fruits, vegetables, and grains are the primary fuel source for basketball and should thus make up the majority of the meal. As a general rule, players eating pre-game meals should fill 2/3 of their plate with carbohydrate and 1/3 with lean protein choices. High fat meals should be avoided in this time period. It is a good idea to experiment with different foods and pre-game food combinations during training periods rather than before games so that players will know what foods work well for them. If a player tends to experience gastrointestinal discomforts, smaller more frequent meals or liquid meal replacement shakes are an alternative option.

In addition to the meal, pre-hydrating is also important. Players should begin drinking ~16oz of water or sports drinks ~2hours before practices or competition. Then ~30minutes before a practice or game players should drink another 4-8 oz of water or sports drink to top off fluid levels. Both the pre-game meal and pre-hydrating fluids should be non-carbonated, non-caffeinated, and non-alcoholic. It is a good idea for players to get in the habit of carrying a bottle with them at all times to encourage fluid intake throughout the day. If a player is prone to muscle cramps during play, in addition to paying special attention to pre-hydrating, he/she should also regularly salt their food at the table and consume salty foods like pretzels, soups, crackers, etc. Choosing sports drinks over water during practices and games is also a good idea for the cramp prone athlete. If the pre-game meal and fluids are skipped one can be certain that the player's performance will be negatively affected, especially in the closing minutes of a game. Coaches and parents can be supportive by encouraging proper intake before practices and games, helping plan team meals at appropriate times, scouting cities and towns ahead of time for restaurants and food access if traveling to tournaments or games, or calling ahead to food establishments to make team arrangements. A little planning prior to playing can give an athlete the energy he/she needs to finish strong.

Game Time Nutrition

Now that the player is fed and ready for the game, it is important to continue effective fueling strategies after the sound of the horn. Both of the performance nutrition keys, carbohydrate and fluids, are as important during the game as before the game. Remembering that these two nutrients are paramount in delaying fatigue and keeping players energized it is wise for players to consume both at every chance he/she gets. Sports drinks contain both the fluid and carbohydrate needed to maintain hydration and energy levels during basketball. This can be accomplished by drinking sports drinks at the recommended intervals of 4-8oz every 15-20min. An easy point of reference is that each 'gulp' is ~1oz of fluid for most people. So, for example, players should regularly consume ~32-64oz during a 2 hour practice.

Players competing at high levels and that see a lot of minutes should also not be afraid to consume a small portion of solid food at halftime to help reload carbohydrate energy used in the first half. Some choices could include a few bites of an energy bar or granola bar, orange wedges, fruit snacks, fig bars, jelly beans, or sport gels. Be sure to consume 6-8 oz of water or sports drink along with these type of carbohydrate sources. Also, it is a good idea to experiment with a few different strategies during practices so players will know what works best at game time. The bottom line is that if players do not make a conscious effort to

adequately replenish fluids and carbohydrate throughout practices and games they very often end up dehydrated, fatigued and forced to accept a suboptimal performance.

Post Game Recovery

Recovery nutrition is an important concept in any sport utilizing carbohydrate energy, but is especially so in the game of basketball. Very often teams will play games on consecutive days or travel to AAU or other tournaments requiring teams to play multiple games several days in a row. This schedule allows for little rest and recovery, but making recovery nutrition a consistent part of the travel plans can help ensure players compete at a high level until the final game. Recovery nutrition couples the two key performance nutrition components, carbohydrate and fluids with a small window of time. Players should strive to consume approximately half of their body weight in grams of carbohydrate within 30min immediately following practice and games. For example, a 140 pound player should be aiming to get in at least 70 grams of carbohydrate in the 30min window. The carbohydrate can come from a combination of fluid and food sources. Parents and players can look at the packaged food label to see how many grams of carbohydrate are in each serving of that particular food item. For example, popular sports drinks contain ~14g carbohydrate per 8 oz, a banana has ~27g carbohydrate, and fig bars have ~11g carbohydrate each; so, a good recovery snack for the 140 pound example player would be 16oz of sports drink, a banana, and 2 fig bars for a total of 77g carbohydrate.

Recovery snacks should be high in carbohydrate, low in fat, and can contain a small amount of protein. Other portable foods such as fruits, raisins, graham crackers, yogurt, pudding cups, and smoothies can also serve as good recovery nutrition snacks. Establishing consistent recovery nutrition habits help the muscles to refuel effectively and efficiently for the next practice or game. If a player misses the recovery window he/she may likely experience fatigue the following day and/or have 'heavy legs' in the subsequent game coupled with an overall decrease in performance. When on the road or at home, team captains should encourage teammates to consume healthy recovery snacks. Parents or coaches can plan ahead by pooling monies and purchasing in bulk healthy snacks to have available for players immediately after each game, especially during tournament weekends. Relying on fast food restaurants or concessions may leave players with less than ideal options. When possible, players should also aim to have a high carbohydrate, low fat meal within 1-2 hours after playing to continue the refueling process.

Along with refueling, fluids must also be replaced after practice or competition. It is a good idea for players to have an idea of their sweat rate. This can be determined by weighing in and out of practice or games and noting the change in body weight. For every pound of body weight lost from sweat, players should rehydrate with 20 oz of water or sports drink within 2 hours of coming off the court. If players routinely loose weight during practices or games, this can be an indication that pre-hydration and game time hydration habits are not sufficient.

Summary

Now that you understand the two basketball performance nutrition keys, how they can help take a player's game to the next level, and some practical tips on how to create your own performance nutrition game plan, the message should be reinforced by everyone. Actively maintaining hydration status and carbohydrate supplies are the keys to fueling the fastbreak.