

Volleyball Nutrition

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A Missing Link

Before we even begin to talk about the importance of nutrition for young athletes, there is a potentially greater issue that needs to be addressed: SLEEP! It is imperative that an athlete get a proper amount of sleep to allow her body time to recover and rejuvenate. Generally, a person can function on six hours of sleep. But, being a top tier athlete-student-sister-daughter-friend is not accomplished by just “functioning.”

For an athlete to perform at her best, she should determine her sleep needs using this general guideline: each workout that she completes in a week should add a half-hour to her sleeping need each night that week. For example, if a player has practice twice a week and attends an additional skills training or strength and conditioning workout, her sleep need for each night that week is seven and a half hours. A player should aim to sleep eight to nine hours a night in the days leading up to a tournament. Also, some studies show that the sleep before midnight is more restful and offers more recovery than those hours after midnight.

Certainly, this may seem impossible with all the responsibilities of life, school, family, and sport but even taking steps in the right direction and adding a little more sleep will be advantageous to achieving goals. Fortunately, short naps for 20 minutes are helpful and can count against the amount of sleep needed at night. Consider:

- Catching a quick nap on your way to practice or when you get home after school
- Going to bed a half-hour earlier and getting up a half-hour earlier
- Taping or Tivo-ing your late TV shows
- Going to the 7:00pm movie rather than the 9:00pm show

Yes, it takes discipline and more time management but the results will be worth it!

Daily Eating Habits for a Teenage, Female Athlete

Creating healthy habits of what, when, how much, and why you eat is another way that an athlete can give herself an edge. Food is your primary fuel source – you wouldn't put cheap gas in a Lexus so why fuel our bodies like they are old clunker cars!

Here are some general guidelines to follow when making choices about food and drink:

1. Eat meals balanced with protein, carbohydrate and fat. "Carbs" are not bad – they are essential for competitive athletes!
2. Eat breakfast – get your day started with a balanced meal. Examples:
 - 2 eggs with whole grain toast, an apple, a glass of juice
 - Whole grain English muffin w/ peanut butter and banana, juice
 - Bowl of oatmeal w/ peanut butter and apple stirred in, juice
3. Try to avoid being hungry – eat small, balanced snacks when feeling tired or slowing down between meal times. Examples:
 - Mix of dried fruit, raw nuts, and raw seeds
 - String cheese & piece of fruit
 - Fruit &/or veggies w/ peanut butter
4. Drink water often throughout the day and with meals – before you feel thirsty. Use the urine test to see if you are getting enough water – if your urine is not nearly clear, you need to drink more water. Sometimes fatigue is due to dehydration. The feeling of being thirsty is indicative of dehydration.
5. At meals, eat slowly so that you are aware of when you are actually full then stop eating. You don't have to clean your plate:
6. Avoid processed, packaged foods containing high fructose corn syrup and/or partially hydrogenated oils.
7. If you want more specifics and like to read labels, here are some numbers you could follow:
 - Carbohydrates: 6-8g per kg of bodyweight (1lb. = .454 kg.)
 - Protein: 1-1.5g per kg of bodyweight
 - 20-30% calories from fat – preferably unsaturated fats like olive oil, nuts, seeds, avocado, and some fish



Proteins and Carbohydrates

Proteins	Carbohydrates
Chicken breast	Baked potato
Turkey breast	Sweet potato
Lean ground turkey	Yam
Some cheeses	Squash
Orange Roughy	Pumpkin
Haddock	Steamed brown rice
Salmon	Steamed wild rice
Tuna	Pasta (preferably whole wheat)
Crab	Oatmeal
Lobster	Barley
Shrimp	Beans
Top round steak	Corn
Top sirloin steak	Fat-free yogurt
Lean ground beef	Whole grain bread
Buffalo	Banana
Lean ham	Plantain
Egg whites/substitutes	Vegetables
Low fat cottage cheese	Fruits

Tournament Food

The Night Before

The meal the night before a tournament should be “balanced” (protein, carbohydrates, fats & water) and is not the time to try new foods. The meal you choose should be carbohydrate-rich, and you should eat as many as half of your bodyweight (lbs) in grams of carbs at this meal (if you weight 150 lbs, you would eat 75grams of carbs), which is like eating a bowl of whole wheat noodles or a sweet potato, salad, and steamed vegetables. Fruit is also a GREAT choice to include in this meal. This meal needs to have a solid protein too such as grilled chicken or grilled salmon. Your goal for your protein grams is one-third of your carb grams (25g if you are 150lbs), which is typical of a piece of chicken that is the size of the palm of your hand. You can get in your healthy fat by putting olive oil on your salad or vegetables, ordering a salad with nuts, or eating a fish with good fats like salmon. Finally, drink plenty of water both before and during your meal.



The Pre-Game Meal

Certainly, there is a trend for all of these meals being “balanced” and that does not change for a pre-game meal. Generally, this meal is smaller than the Night-Before meal, is best eaten two to three hours before the game and, again, is not a good time to try new foods. A player is looking for foods or meals that are healthy carb-rich and contain substantial protein. This is a great meal to know what works well for you and to keep it consistent. Again, fruit is a GREAT choice as part of this meal. Some good examples are:

- Pasta with tomato sauce and chicken
- Grilled chicken sandwich with a baked potato with broccoli and salsa
- Greens salad with grilled chicken and a sweet potato
- Turkey sub with pretzels or baked chips
- Eggs, oatmeal, fruit and juice if in the morning

This is also a good time to drink a good 32 ounces of water – an A5 water bottle is 34 ounces to give you a reference!

After a Match - More to Play on That Day!

The body does not really store carbohydrates, which are the number source of energy, so it is imperative that players refuel after they play! There is a critical 30-60 minute window after intense activity in which the body is wide open to be replenished and refueled. Thus, players must make it a priority to eat after competition (or shortly after practice). This is the time for a healthy carb-rich snack that contains protein and a moderate amount of fat. The protein and fat are important because they slow down the body's use of the carbohydrates, giving the athlete energy for a longer period of time. Further, a snack that is well-balanced does not spike the player's energy (causing an impending and unavoidable crash!) but offers her sustainable energy for the next few hours. Some examples are:

- Fruit with peanut/almond/cashew butter
- Cheese and fruit
- Veggies with peanut butter
- Granola bar
- Trail mix -- Dried fruit mixed with raw nuts
- Applesauce
- Cheese and multi-grain crackers
- Yogurt and granola with raisins
- Multi-grain bagel or Graham crackers with peanut butter

Quite a recurring theme of fruit, cheese, and nuts! Be aware of players' allergies to nuts and the degree of their severity. Also, if a player gets cold sores, she may want to avoid nuts and eat the cheeses instead.

Special Note on Sugary Snacks – candy, cookies, Little Debbie's, etc – at tournaments

There can be a place in an athlete's diet for sugary snacks; that place is just not on a food table at a tournament. Foods that are high in refined sugar cause such an energy spike and subsequent crash that offering these foods to athletes who need to perform at a consistent level for an extended period of time sets them up to fail. Be sure to offer sweet foods like fresh and dried fruit to curb sugar cravings. And, maybe if they play really well, the coach will let them have dessert at dinner! That can certainly be motivating for some of us!

End of the Day

First, remember the window of recovery (30-60 minutes) when considering when to eat after you finish playing for the day. If your team is going back to the hotel to shower and then go to dinner, you **MUST** eat a snack like explained above before or as you leave the gym! If you are going back to the hotel and going to bed, you **MUST** eat the appropriate amount of food to replenish your body!

The last meal of the day is critical as well – considering it is also the Night-Before meal for the next, more important round of the tournament. If the team goes out to dinner, a player's meal should basically be the same as the Night-Before meal. If the team stays in the hotel and orders in, good choices are:

- Pastas with tomato-based, meat sauce
- Salads with chicken
- Subs

Again, a player should drink lots of water to rehydrate and prepare for the next day.

A Word on Sports Drinks

First, keep in mind that there are powerful marketing groups behind sports drinks. Certainly, players lose “electrolytes” (mostly potassium and sodium) through sweat during intense activity. These electrolytes need to be replaced after the activity because they are important in nerve impulse and muscle contraction. Sports drinks are one way to do that; however, the large amounts of sugar and artificial flavoring in a sports drink can have negative effects on a player's body. When the body is sugar-loaded, a person's response rate slows significantly, and she often comes to a place of “crashing” (often due to excess insulin) to which the body reacts by craving more sugar; thus, the cycle of consuming increasing amounts of sugar begins, which escalates endurance loss and quickens fatigue. Further, the concentration of most sports drinks is designed for the needs of a male athlete playing in the summer heat. The needs of this athlete and the need of a volleyball player at a tournament are quite different.



A Word on Sports Drinks – Continued

Consider replacing lost electrolytes by eating the appropriate foods shortly after a match as explained above. Use a fruit and salty snack to replenish and refuel fairly quickly. A player could also drink diluted fruit juice at this time. If you believe you have found success with sports drinks, consider diluting the drink considerably and using it after matches rather than during. Note if this change makes a difference for you and your sustained energy level.

Finally and most importantly, an important idea to consider and apply when choosing a sports drink is that there is protein present. Generally, a well-balanced drink will have the relationship of four grams of carbohydrate to one gram of protein. Accelerade is a good example of a drink with this type of balance. A sports drink containing protein at this ratio will not only rehydrate and replace salt but is also proven to aid in both muscle recovery and repair thereby improving endurance and performance on tournament days.

Final Thoughts

Certainly, this document is not exhaustive and does not attempt to address the needs of each individual. It is simply my attempt to better educate and inform girls and families about another element of being a successful student-athlete. I am not a licensed nutritionist, so I offer this information to anyone who reads it as suggestion and as a compilation of information that I have studied, learned from various doctors and nutritionists, and have had success with personally and with the athletes I have coached. Thanks for reading!

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