

EMPIRE VOLLEYBALL CLUB

Team Guide to Sports Nutrition

FOOD, FUEL, FUN & COMPETITON

In volleyball, like other stop-and-go team sports, speed, agility, and power are essential and depend on proper physical training and adequate rest as well as high-quality foods. Being part of a team involves setting goals and thinking as a group. Good nutrition is important as an individual goal for top mental and physical performance, and also as a team goal—one that can fuel a team with a competitive edge for winning.

This Team Guide to Sports Nutrition is organized as a quick reference to pre- and post-workout/game fuels in general, suggested list of foods for meals and snacks, hydration, eating on the road and suggested books and websites for additional nutrition information for athletes.

Pre-Workout Fuel –PARENTS TAKE NOTE!

- **Athletes should fuel their bodies 2 to 3 hours before practices and games** with a high-complex carbohydrate meal or snack (see *“Pre-Workout/GAME Meal and Snack Ideas”*). Carbohydrates are the fuel of choice for endurance and power, and the body needs enough of the proper kind of energy to perform well through the workout. Carbohydrates are converted to energy (glucose) used in the muscles, and brain, and some is also stored in the liver and muscle tissues (glycogen), for endurance and power in high-intensity, short-duration activities. If your body runs out of carbohydrate fuel during exercise, your performance level will most likely drop.
- **Athletes need about 2/3 of their food as high-complex carbohydrate options**—including foods such as whole grain breads, cereals, pasta, rice, fruits and vegetables, and **1/3 as lean protein**—lean meats, low-fat dairy, eggs or legumes. Some fats may accompany these foods, but it is important to limit high fat foods and added fats because they slow digestion, leaving food in the stomach for hours—not good for workouts or competition. High complex carbohydrates give a natural yet not too quick energy boost, and they leave the stomach sooner, so that blood flow carrying nutrients and energy will reach the muscles where it is needed.
- **Before exercise, players should eat foods they know work well for them.** (See also *“Cautionary Foods”*)
- **Pre-game meals can be organized for the whole team**, either prepared and stored in advance or by making healthy choices while on the road (see *“Eating Well on the Road”*)
- **Athletes need to replace the sodium lost in sweat** — especially for those who experience cramping. Athletes can do this by and drinking water during training and games, including sports drinks if experiencing heavy sweating; also salting food, eating some salty snacks like pretzels, crackers, and soups can help replenish sodium lost through sweat.

Pre-Workout/Game Meals and Snacks Ideas

Easy Access to Snacks

Players are often running from school or other activities directly to practices and have little no time to stop for a high-energy snack to boost energy for performance. At competitions, access to healthy food choices may be limited. To stay fueled, athletes need to keep healthy snacks accessible and pack into **insulated food bags** in backpacks and coolers in cars. Foods need to be fresh, healthy and appetizing! Make sure to have variety and include some foods high in protein, others high in complex carbohydrates like whole grains, and some fruit for refreshing nourishment. Examples are:

- Fresh fruit: oranges, grapes, apples, bananas, berries (in containers)
- Fruit cups or applesauce (remember spoons)
- Fresh veggies: cut carrots, bell peppers, cherry tomatoes (go easy on dips)
- Crackers: whole grain, Graham or saltines with peanut butter
- Nuts: peanuts, almonds, etc.
- Cheese wedges, sticks
- Low-fat Yogurt cups or squeeze tubes
- Sandwiches: peanut butter, turkey, lean roast beef, ham or Low Fat cheese
- Dried fruit such as raisins, cranberries, apricots, apples, or peaches
- Granola and cereal bars (low sugar brands)
- Energy bars (high protein, low sugar brands)
- Dry cereal
- Pretzels
- Fig bars
- 100% fruit or vegetable juice
- Sports drinks (Diluted by 50%, if needed to replenish electrolytes)
- Low fat/nonfat milk

Pre-Workout/GAME Meal Ideas

PARENTS BRINGING SNACKS (“DINNER”) TO THE WHOLE TEAM BEFORE A GAME:

(Remember to bring small plates, utensils and cups if needed and napkins)

DO NOT BRING COOKIES, CANDY, CHIPS, DOUGHNUTS, OR FRUIT “DRINKS” OR ANY OTHER FOODS HIGH IN SUGAR AND FAT AND LOW IN NUTRIENTS—THESE FOODS WILL NOT HELP PERFORMANCE!

DO BRING ANY OF THESE OPTIONS, HIGH IN PROTEIN, SOME CARBOHYDTATE NECESSAY FOR ENERGY AND HIGH IN VITAMINS AND MINERALS NECESSARY FOR HIGH PERFORMANCE:

- Sandwiches with lean meats, low-fat cheese or peanut butter (Use whole wheat sliced bread in quarters, or small whole wheat or sour dough dinner rolls, or sliced or small bagels—no cream cheese, it is a fat, not high in protein)
- Fresh Fruit: oranges, grapes, apples, bananas, berries (plain or as fruit salad in containers)

- Yogurt (to limit sugar intake in flavored yogurt, use plain and have fresh fruit with a small amount of honey)
- Crackers: whole grain, Graham or saltines with peanut butter and an assortment of low-fat cheeses or cheese sticks
- Dried fruit such as raisins, cranberries, apricots, apples, or peaches
- Water or 100% fruit juice of high nutritional quality

ADD TO YOUR OWN ATHLETE'S FOOD BAG FOR AFTER SCHOOL SNACKS BEFORE GAMES

(Don't assume your athlete will like or want what is provided by the team parent for a particular game. Provide what you know your child will eat, but make sure it is a healthy choice):

Any of the foods above plus:

- Baked/grilled lean meat, poultry or fish; pasta with marinara or low fat cheese or meat sauce
- Whole grains: rice, corn, bread or rolls, crackers; potatoes; legumes (beans and peas),
- Steamed vegetables: greens, beans, broccoli, etc.
- Salad (with low fat dressing or small amount of regular dressing): dark green lettuce, tomatoes, other vegetables
- Water, 100% Fruit juice or low fat milk

Cautionary Foods

Sodas, sugar-laden snacks and processed foods are among the "cautionary" foods in the athlete's diet. Be aware that completely disallowing foods can lead to increased cravings and higher consumption later. **Minimize the amounts and frequency of intake, and definitely don't include them before practices or the day before or during a competition.**

Remember that everything that goes into the body is building material and becomes a part of you in some way; it can either build you up or tear you down. Ask yourself: Do I want to build my body (muscles and bones, healthy skin and hair, circulatory and immune systems) and affect my mental and physical performance with high-quality or low-quality building materials?

- **Sugar**-laden snacks and sodas spike the blood sugar within minutes with glucose, which can give an initial energy boost, but the downside is that excess sugar triggers an insulin over-response, resulting in lowered blood glucose in as little as 20-30 minutes, leaving the player fatigued (with even lower energy than before the snack), and intestinal bloating or cramps. High sugar intakes can also impair the immune system, lowering resistance to colds and flu. To lessen the negative effects when eating sugar foods avoid eating them on an empty stomach; eat them with other foods, like whole grains and proteins or during meals to slow absorption.
- **Sodas**—with very high sugar content, many with high caffeine (which can also cause sweating, dehydration and nervousness) and chemical additives—also have a high phosphate content, which is known to leech calcium out of the bones—definitely not good for anyone, but especially competitive athletes who are at higher risk for injuries, as calcium is needed for strong, dense bones and healthy muscle contractions.

- **Highly Processed Foods**--usually in the form of packaged or fast foods—contain unnecessary additives, which in some individuals can unknowingly cause low-grade allergy symptoms, such as headaches, low energy, fatigue, sinus problems or recurrent infections. Also in processed foods is a type of fat called “trans-fatty acids”, a chemically produced fat by a process that takes a plant oil and “plasticizes” it into a semi-solid consistency. It is identified on food labels as “hydrogenated” or “partially-hydrogenated” oil. Trans- fatty acids are known to be damaging to arteries and heart health, so limiting intake is wise.

Choose foods as close to their source as possible. Substitutions for the above foods, in addition to the list of foods for Pre-Workout Snack ideas include:

- **Blend your favorite fruit juice(s) and seltzer or soda water and ice...tasty and refreshing** substitute for commercial sodas
- **Homemade muffins, etc. with whole grain flour, oats or ground nuts, less sugar and natural oils or “real” butter; use granola or energy bars rather than candy bars,** instead of processed baked goods and sugar-laden snacks
- **Prepare larger amounts and freeze portions for meals or food bag snacks** as a substitute processed meals/snacks
- **Get organized and plan ahead: Healthy habits lead to better performance, now and forever!**

Eat Well On the Road

Making good food choices while on the road can be tough, especially when restaurant options are limited. However, it's important for athletes to pay attention to nutrition both at home and away. Bringing foods from home ensures good choices and availability. Most hotels offer small refrigerators when requested at booking. This can allow for perishable foods to be kept fresh, and with insulated food bags or coolers with ice or cold packs, fresh foods can be transported to and from games. There are plenty of options (even at fast food restaurants) that can fuel the body for optimal performance.

*Good Fast Food Choices**

- Scrambled eggs, French toast, waffles or pancakes (limit syrup!), cereal, English muffins
- Lowfat sandwiches like turkey, ham, roast beef, low-fat cheese or veggie submarines, or grilled chicken breast, or lean roast beef sandwiches
- Grilled regular-size hamburgers or cheeseburgers
- Tacos, burritos, refried beans, and rice
- Salads with grilled chicken breast, turkey, or ham, extra vegetables and a small amount of light dressing
- Baked potatoes, chili, and mashed potatoes (easy on the toppings)
- Lowfat/nonfat milk, 100% juices or smoothies

*Good Sit Down Choices**

- Proteins like chicken breast, grilled fish, or eggs with fruits and vegetables (e.g. salad, steamed vegetables, fresh fruit, fruit salad).
- Grains like whole grain toast, bagels, bread, rice, or pasta (with marinara or low fat cheese or meat sauce).
- Fresh salads, vegetables, fruits, pasta salads, lean meat slices, and soups. (Go easy on dressings and salads with creamy mayonnaise-type dressing.)
- Lowfat/nonfat milk, 100% fruit juices, or fruit smoothies.

**Balance the meal with protein, carbohydrates, fruits, and vegetables*

Post-Workout Fuel

Athletes burn up muscle energy stores during a workout. So it's important that athletes:

- Replenish muscle energy (glycogen) stores by choosing complex carbohydrate-rich foods within **30 minutes after a practice or game** and again within 2 hours.
- Have snacks like cereal mixed with peanuts and raisins, or an energy bar, and **water** or a hydrating sports drink to refuel fast.

Fluids: Hydration is Key

- Water is a key component of the athlete's body, making up 2/3 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% loss of body weight through sweat (i.e., 2.5 pounds for a 125-pound player) can put athletes at a disadvantage. Some athletes, however, lose more than a gallon of sweat during a practice or game, especially in hot weather.
- Athletes who train in hot and humid conditions, whether it's outside or in a gym, and don't properly replace their fluids run the risk of dehydration. Because dehydration can take a serious toll on performance, it's important for athletes to know how to get plenty of fluid:
 - **Remember fluids throughout the day.**
This may be as simple as grabbing a bottle of water first thing in the morning, then using fountains, coolers, and sport beverages for drinking throughout the day.
 - **Drink small amounts of water frequently**, rather than large amounts less often.
 - **Drink cool beverages** to cool your core body temperature and reduce sweating.
 - **Hydrate 2 to 3 hours before practices and competitions.**

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 into competition.

- **Drink during workouts or competition.**

Water replenishment is essential. In very hot weather or when extreme sweating occurs, sports drinks can help ward off dehydration and muscle cramps because they help replenish both fluid and electrolytes (i.e., sodium and potassium) lost in sweat.

- Pay attention to the **amount and color** of your urine. You should excrete a large volume that is nearly colorless. Small amounts or dark colored urine can indicate dehydration, and can be an early warning sign.

CONCERNING WEIGHT:

Most important: DO NOT DIET. Additional aerobic exercise (continuous movement like fast walking, jogging, swimming, cycling, treadmill, dance, etc.) for at least 30 minutes, 3 or more times a week, can prevent weight gain and together with healthy eating, can address weight issues. Limiting foods will only end up slowing down your metabolism, wasting vital muscle tissue, weakening your system, and will be counterproductive in the long run. 98% of dieters who lose weight, eventually gain it all back plus more! For every deprivation there is an equal and opposite indulgence (sooner or later!). Diets don't teach anything about what is causing the weight gain and they are detrimental to your health! In addition, eating disorders always start with a diet. So...don't start! Be smart and focus on your fitness and eating foods that give you high nutrition and endurance and the weight will take care of itself. To gain shape, tone and strength, building muscle weight depends on eating enough healthy food, as well as working out with resistance exercises or weight machines. If you (or family members) would like additional information and consulting in this area, please see the contact information below.

Our goal as team families is to support our athletes in a positive way...never talk judgmentally about your—or someone else's—body, especially your child's! Always praise and encourage a positive attitude. Girls are growing at a fast pace, and left alone, weight issues do better clearing up on their own with little interference, along with providing a healthy environment in the home!

Other Resources:

Web resources: Comprehensive List of Websites at the Fitness, and Sports Nutrition Topic Page: www.nal.usda.gov/fnic/etext/000054.html

Books by Professional Sports Nutritionists:

Nancy Clark: **Sports Nutrition Guidebook**, 3rd Ed., 2003

Ellen Coleman: **Eating for Endurance**, 4th Ed., 2003

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