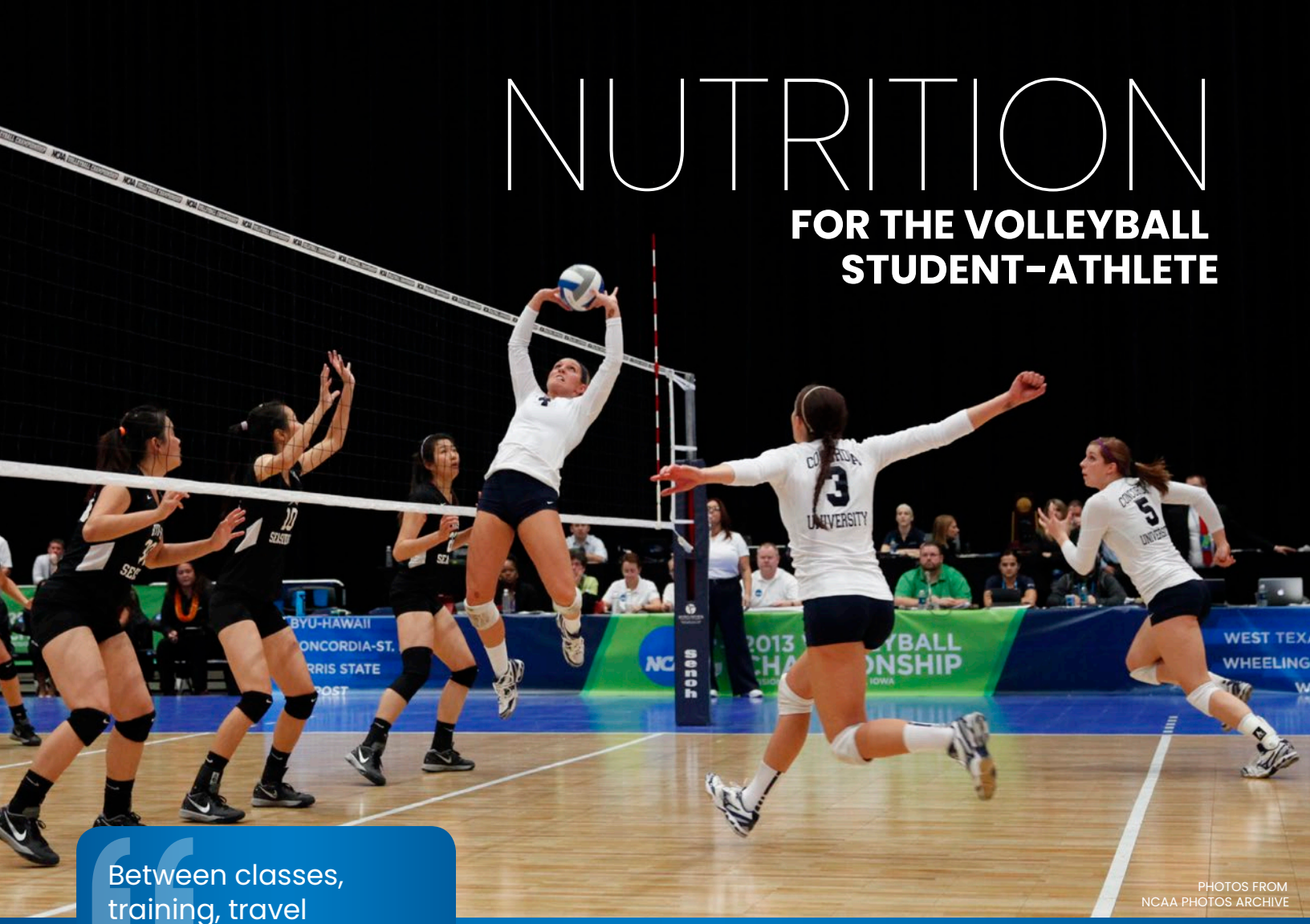
NUTRITION

FOR THE VOLLEYBALL STUDENT-ATHLETE



PHOTOS FROM NCAA PHOTOS ARCHIVE

> Between classes, training, travel and matches, keeping good nutrition consistent is difficult. All the trips and restaurant meals during the season affect my fitness, sport performance and studies. How can I build an eating plan that works both at home and away?

College volleyball is fast and demanding, calling for year-round training and conditioning. Players maintain a high muscle-to-fat ratio while balancing strength, speed, stamina and skill. Training includes strength work, conditioning, skill sessions and games or scrimmages almost daily.

A successful nutrition strategy combines balanced, consistent eating and hydration, a positive team attitude toward nutrition, good fueling before and during play, and careful attention to recovery.

Information provided by

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Volleyball is an explosive, full-body sport requiring power, strength, speed and agility. Competition demands constant mental and physical engagement and quick, precise reactions. To gain the most from training and perform well, college players need consistent nutrition and hydration plans tailored to individual needs.

PRESEASON: CREATE A STRONG NUTRITION FOUNDATION

Preseason centers on core fitness and skill work. Long sessions, often several a day, make adequate fuel and fluids vital to health, safety and productive training. Too little fuel slows adaptation and recovery and increases susceptibility to illness and injury.

Your Foundation Diet

A reliable, flexible core eating plan supports nutrient balance and better training and performance. It should:

1. Spread calories through the day, beginning with breakfast.
- Start early enough to fuel morning workouts. Keep meals regular and distribute food across the day.

2. Build the plan around your carbohydrate (CHO) needs.
- For general training, calculate six to eight grams (g) of CHO per kilogram (kg) of body weight (bw) daily, or 6-8 g/kg bw/day. Harder, more frequent training may require eight to 10 grams. *Example for* a 160-pound (73 kg) athlete: 73 kg × 6 g/kg = 438 g CHO; 438 g CHO = *1,752 kcals from CHO.*

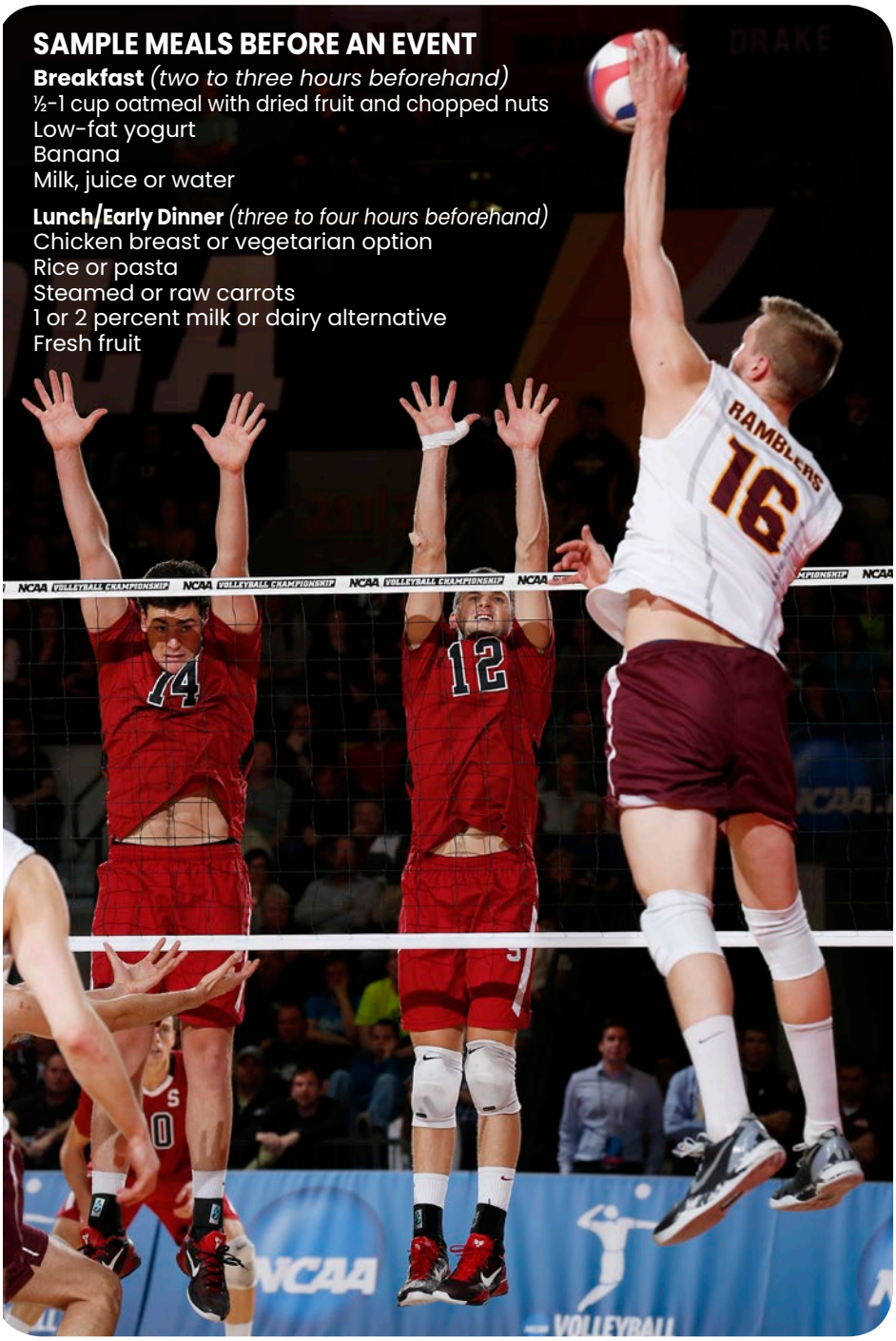
3. Combine different foods and food groups at each meal.
- Mixed meals provide a useful balance of needed nutrients.
- Always include whole-grain carbohydrate, lean protein, and a high-fiber fruit or vegetable.

4. Drink throughout the day.
- Have fluids before, during and after activity. Keep a full water bottle nearby and consider sports drink an hour before and during training for readily absorbed fluid and energy.
- Recognize dehydration symptoms. During training, aim for four to six ounces every 15 to 20 minutes.

SAMPLE MEALS BEFORE AN EVENT

Breakfast *(two to three hours beforehand)*
½-1 cup oatmeal with dried fruit and chopped nuts
Low-fat yogurt
Banana
Milk, juice or water

Lunch/Early Dinner *(three to four hours beforehand)*
Chicken breast or vegetarian option
Rice or pasta
Steamed or raw carrots
1 or 2 percent milk or dairy alternative
Fresh fruit



COMPETITION

Volleyball events differ in length and frequency. Single matches need a different nutrition approach from tournaments. Match length is unpredictable, so prepare a fueling plan that covers several possibilities.

Fueling Before an Event

Most college matches take place in the afternoon or evening, except tournaments and occasional other events. This regular schedule usually allows a pregame meal and, when needed, a snack shortly before play.

- Eat the pregame meal three to four hours before competition begins, rather than before warm-ups, which may start an hour earlier.
- Include fluids, whole-grain starchy carbs and a small to moderate serving of quality protein. Keep fat low and fiber moderate.
- Test meals during training to identify foods that cause gas, cramps, nausea or slow digestion.
- Drink some fluid without filling up so much that you cannot eat enough calories and nutrients for competition.
- When time is short, as with early games or successive matches, eat smaller amounts of higher-fluid foods nearer play. Try low-sugar yogurt and cereal, peanut butter and jelly, banana with sports drink, or a less-sweet energy bar with water.
- A small snack in the final hour may help: one to two cups of sports drink, half a green-tip banana, a few pretzels or small fig bars, or about 100 calories of pre-event sports food.

Fueling During Competition

Fueling and drinking opportunities are limited but available during substitutions, timeouts, media breaks and between sets. Use them. Volleyball's explosive, mainly anaerobic demands benefit from small, frequent servings of carbohydrate and other fuel.

Fueling may distract you or cause stomach discomfort, but these concerns need not rule it out. Work with a sports dietitian to select suitable options and test them with the team during hard training sessions that mimic competition.

Practical Competition Fueling

- Tell support staff when your energy is dropping.
- Use every off-court break to drink and refuel.
- Take small servings of solid foods that are very low in fat, fiber and protein, together with fluid. Options include a few bites or ounces of sports drink and purpose-made sports bars, low-lactose or lactose-free liquid meal replacements, gels and other appropriate during-event foods.



Recovery After Competition

Matches may be separated by days or just hours. All players who participated need recovery food and a check of fluid-replacement needs, whatever the next match time.

Begin promptly. Debriefs, treatments, travel to the hotel and media duties should not postpone recovery fueling.

- Buy team recovery snacks or sports drinks ahead for immediate use after play.
- Bring your own options: vanilla wafers, pretzels, affordable shakes or meal-replacement drinks, or granola bars.
- Players active for more than 60 minutes should consume one to 1.5 grams of carbohydrate per kilogram of body weight. If that is hard to manage, begin with 50 grams of carbohydrate.
- A bar or meal-replacement drink will often provide enough recovery protein but too little carbohydrate.
- Eat and drink again within two hours to continue recovery, especially when another match is expected within 24 hours.

Tournaments

Tournament schedules and travel complicate pre-event and performance fueling. Gaps between matches may be short or unexpectedly long.

- Plan snacks or small meals around the schedule where possible.
- Check food outlets near hotels and venues that can serve your team quickly. Reserve seating, review delivery menus and call sandwich shops, even those without advertised delivery; a large order may be welcome.
- Concessions seldom offer suitable during-event fuel. They may offer recovery choices such as lemonade, chocolate milk or pretzels.
- With under two hours between matches, use immediate pre-event or during-event approaches to take in small amounts of fuel and fluid.
- Carry a water bottle, keep it full and sip all day.

Championship and Postseason

Higher stakes, excitement and stress make travel meals and competition fueling harder. Keep your eating plan consistent. Spread intake across the day, avoid missed meals and pack spare snacks for pre-event fuel and recovery.

OFFSEASON

Offseason often brings less stress, more rest and recovery, and changes in training volume and intensity. Keep following your core



nutrition plan. Muscle loss or unwanted fat gain can cause substantial body-composition changes now.

- Less training may lower calorie needs. Reduce portions rather than food groups, and keep breakfast.
- Monitor weight while accepting some fluctuation. Lower muscle glycogen and water and some muscle loss can be normal. Depending on body weight, changes may range from one to five pounds.
- If you want to change body composition, address it now. Set realistic goals with coaches, sports dietitians and athletic trainers. Create an individual plan and check progress often.

Body Composition Goals

Volleyball players tend to be lean and muscular. Reaching that profile requires specific, high-quality training and enough fuel and nutrients.

1. Work on body-composition goals in the offseason when possible.
2. If changing body composition during the season, keep fueling adequately before and during training.
3. Avoid calorie restriction during twice-daily practices. Improve food quality and distribute intake across the day instead.
4. Weight loss from under-fueling does not create lasting performance gains. Low weight alone does not improve athletic performance.
5. Individualize body-composition plans and have a sports dietitian monitor them regularly.



EATING ON THE ROAD

Frequent travel, tapered workouts, disrupted sleep, a tight per diem and restaurant or hotel meals can affect the next match. Over a season they may also contribute to muscle loss or fat gain. To limit these effects:

- Research meals and dining before travel.
- Check hotel breakfast choices and in-room refrigerator availability.
- Pack breakfast staples such as oatmeal, granola, peanut butter and bagels.
- Follow your usual eating approach as closely as possible.
- Ask for grocery-store stops.
- Choose restaurants serving sandwiches, light meals and low-fat options.
- Pass on appetizers, often the menu's fattiest and least nutrient-rich choices.
- Avoid overeating at night, which can disturb sleep and suppress breakfast appetite. Breakfast matters regardless of competition time.

Written by SCAN/CPSDA registered dietitians (RDs). For advice on customizing an eating plan to meet your nutrition goals, consult an RD who specializes in sports, particularly a board-certified specialist in sports dietetics (CSSD). Find a qualified RD at www.scandpg.org or www.sportsRD.org.