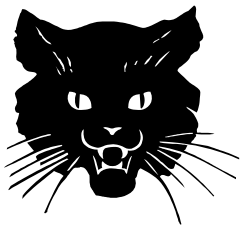

The University of Arizona
CATS Team Nutrition
VOLLEYBALL

Championship volleyball players need energy for:

Explosive Power *Quickness* *Strength* *Precision* *Endurance*

Then there is the challenge to attain peak performance while at the same time limiting excess weight to maximize jumping ability and quickness on the court. What you eat and drink, and when, can give you the edge. **Here are the basics.**

Calories: 1. Your body needs energy for its basic functions and activities of your daily like as a student.
To calculate this multiply your weight times 13.
Example: 160 #s x 13 = 2080 calories

2. To fuel your practice and competition.
Estimated energy expended per minute of vigorous volleyball:

Body weight in lbs	100	130	160	190	220
Calories burned	6.5	8.4	10.4	12.4	14.4

Example: (At 160#s) 10.4 calories x 45 minutes vigorous play = 468 calories

3. Add the results of #1 and #2 together for an estimate of your daily calorie needs.
Example: 2080 + 468 = 2548 (or 2500 to 2600 calories per day)

Specific "Fuels" (calories) needed: Your sport relies 90% on **anaerobic energy,** which is provided largely by **carbohydrate**. Below is the recommended allocation of calories to provide not only energy, but the raw materials for muscle repair, growth and maintenance, for a strong immune system, and for mental quickness:

Carbohydrate ~ 60% - 65% of total calories
Protein ~ 15% of total calories
Fat ~ 20% - 25% of total calories

Additional Key Nutrients that may be needed:

Take a multivitamin/mineral tab daily (Centrum or a "look-a-like" is good) as an insurance policy to meet all your needs.

Sodium, Potassium: Usually replaced with a typical diet and use of sports drink for rehydration and recovery.

Calcium: A diet consistently low in Calcium can contribute to stress fractures and longer recovery times if injured. Sources: milk, yogurt, cheese, calcium fortified juices and cereals, soy products, and calcium supplements. Two easy-to-take supplements are Viactiv and One-A-Day chewables (500 mg each). There are also generic store brands of each of these types.

Iron: Essential for oxygen transport from lungs to working muscles. Low iron can lead to low energy and endurance. Sources: lean red meats, dark meat of chicken or turkey, fortified breads and cereals, beans and peas (dried). Supplements have side effects, see Dr. Porter before using.

Timing: 1. Generally, eat and drink throughout the day, not just big quantities once or twice. This will help you reload energy (glycogen) stores more effectively for top performance and burn calories more efficiently for weight management.

2.Pre-workout snacks/meals. It is important to "top off" with a light meal or snack within 2 hours before your workouts or competition.

3.Post-workout snack/meal. Even more important, have a high carbohydrate snack within 15 to 30 minutes after your workout, followed by a meal of both carbs and protein within 2 hours of your workout. It is okay to just eat a meal within 30 minutes of your workout (both carbs and protein).

Special note – post weight-lifting workout: post-workout snack should include both carbs and protein to help protein synthesis (ex: 300 calories, 20 – 30 grams protein).

Fluids: For cooling your body, maintaining blood volume to deliver energy and nutrients to brain and muscles, and for maintaining good concentration and general energy levels. Hot, humid conditions increase the need for fluids beyond the guidelines below.

General Fluid Recommendations:

1. Stay well-hydrated throughout the day, everyday: urine should be clear and pale, and you should need to urinate at least 4-5 times per day.
2. Two hours before practice or match: At least 2 cups of water or sports drink
3. During warm-up: ¼ to ½ cup fluids as tolerated.
4. During practice or match: ½ - 1 cup water or *sports drink* every 15 minutes.
5. After practice or match: 2½ cups water/sports drink for every pound lost in sweat

Weight management:

1. "In season" is not a good time to try to reduce body fat. You can really decrease your energy for performance.
2. For weight loss, reduce calories ~300 /day (not below 1400 calories) and consider adding cardio.
3. For weight gain (lean mass), add calories ~500/day and work hard in the weight room.
4. Use of weight loss pills, teas, or laxatives can be hazardous to your health, sleep, and, hence, performance.
5. Be aware that poor sleep and stress can also impact weight management and performance.
6. Seek help if you have concerns in this area to learn what could work for you and keep your performance high at the same time.

All-Day Tournaments: Keeping up with your nutrition during a day-long tournament is a challenge. Your play will suffer if you don't re-fuel between matches, and in the end, just a slight edge in energy and concentration could mean the championship. The following snacks are quick and easy-to-transport foods to have available when time is short between matches.

Sports Drinks	100% Fruit Juices	Fresh Fruit
Energy bars or gels	Yogurt	Dried Fruit
Granola Bars	Pretzels	Trail Mix (buy or make your own)
Cereal	Crackers	Peanut butter and jelly sandwich

Preseason Training Needs: This is an important time to enhance strength, build muscle, increase fuel (glycogen) storage capabilities, and improve fitness. Pre- and post workout fueling must be a priority during this crucial time. Consistently eating high-carbohydrate meals and snacks, especially before and after workouts, is essential to your success. Calorie levels should be adjusted for the increased playing time of 2- or 3-a-day practices.

Source: Sports Nutrition-A Guide for the Professional Working with Active People, 3rd Ed. Christine Rosenbloom, ed. The American Dietetic Association, 2000.