

VOLLEYBALL GUIDE

SPORTS NUTRITION

U.S. VERSION

When you've worked your hardest to train and to refine your volleyball skills, make sure that you're at your best on the court at all times by being prepared nutritionally. That means attention to hydrating and fueling prior to play, refueling and rehydrating during matches, and promoting a full and rapid recovery after play. By making sports nutrition an integral part of your game strategy, you can stay ready for every workout and playing at your best throughout each game. Follow these tips for optimal performance on the court.

BEFORE PRACTICE/GAME:



Start Hydrated

- Start hydrating 24 hours prior to your game/training session
- Check urine color: Lemonade color = well-hydrated; apple juice color = drink more fluid
- 2–3 hours before exercise: Drink 14–20 fl oz of water or sports drink (400–600 ml)
- During active warm-up: Drink another 8 fl oz (240 ml) — about 8 swallows/gulps

What and When to Eat

- Focus on carbs
- If you have more time before a game or practice (4 hours) eat more; if you have less time (2 hours), eat less to avoid stomach distress
- Eat a high-carb snack 30–60 minutes before a game or practice to top off fuel stores

Carbohydrates

are the main fuel source for volleyball players

2–4 HOURS BEFORE A GAME OR PRACTICE

Recommended amount of carbs

2 hours: 0.9 x weight (lb) = _____ grams (A)

2.0 x weight (kg) = _____ grams (A)

OR

4 hours: 1.8 x weight (lb) = _____ grams (B)

4.0 x weight (kg) = _____ grams (B)

Meals should be high-carb, moderate protein, low-fat, and low-fiber

High-carbohydrate pre-game sample meals

Cold or hot cereal with low-fat or nonfat milk and fruit or fruit juice

French toast or pancakes with maple or fruit syrup

Toast with jam or honey, and low-fat yogurt

Breakfast burrito (scrambled eggs, salsa, and cheese in a flour tortilla) and fruit nectar

Bagel or English muffin with jelly and/or peanut butter, banana, and fruit juice

Pasta or cheese ravioli w/low-fat, tomato-based sauce, French bread or low-fat breadsticks, steamed veggies, low-fat/nonfat milk, pudding snack, and canned fruit

Turkey sub sandwich with tomato, lettuce, mustard, baked chips, fruit juice, and low-fat frozen yogurt

Thick-crust cheese pizza, low-fat gelato, and canned peaches

Baked or grilled chicken, turkey, lean beef, or fish, steamed rice, dinner roll, cooked green beans, low-fat frozen yogurt, and fruit juice

Information presented in this booklet is intended to impart general fitness, nutrition, and health information. Nestlé is not engaged in rendering medical advice or services. The information presented in this booklet is not intended for diagnostic or treatment purposes. You should consult your doctor for medical advice or services, including seeking advice prior to undertaking a new diet or exercise program. Advance consultation with your doctor is particularly important if you are under eighteen (18) years old, pregnant, breastfeeding, or have health problems. Never disregard professional medical advice or delay in it because of something you have read in this booklet.

30-60 MINUTES BEFORE A GAME OR PRACTICE TO TOP OFF FUEL STORES

Recommended amount of carbs	
Aim for about 40-60 grams of carbohydrates	0.3 g to 0.5 g x weight (lb) = _____ grams (C) 0.7 g to 1.1 g x weight (kg) = _____ grams (C)
Quick-to-digest, high-carbohydrate options	Carbs (g)
Fruit smoothie made with mango/banana/berries and low-fat or nonfat milk or yogurt (8 fl oz/240 ml)	30-35 g
1 serving fresh fruit or 100% fruit juice (1 cup)	25-30 g
Low-fat or nonfat yogurt (6-oz/180-ml container)	33 g
Fat-free frozen yogurt, gelato, or sorbet (1 cup)	45 g
PowerBar Performance Energy bars	41-45 g
PowerBar Fruit Smoothie Energy bar	43 g
PowerBar Energy Bites: 1 pouch	52 g
PowerBar Gel	27 g
PowerBar Gel Blasts energy chews: 1 pouch	45 g
PowerBar Endurance sports drink (20 fl oz/ 600 ml)	42 g

Try PowerBar Energy Bites, a PowerBar Gel or PowerBar Gel Blasts energy chews, along with PowerBar Endurance sports drink during breaks



PowerBar Energy Bites

DURING PRACTICE/GAME: 1 BEFORE 2 DURING 3 AFTER

Stay Hydrated and Fueled

HYDRATE AND FUEL AT EVERY BREAK IN THE ACTION

- Drink about 5 fl oz (150 ml) during a quick stop in play; 1 gulp equals about 1 oz
- Be sure to get 30-60 grams of carbs per hour (for exercise >1 hour) or 45-90 grams of carbs per hour (for exercise >2 hours) to help delay fatigue and improve performance

STAY IN YOUR HYDRATION ZONE: AVOID LOSING MORE THAN 2% OF YOUR BODY WEIGHT

- Do this by drinking at least 13-26 fl oz (400-800 ml) water or sports drink each hour
- Try small amounts such as 3-7 ounces (100-200 ml) every 15 minutes
- Drink more if you sweat more
- Consume a sports drink with sodium, especially in hot or humid conditions

THREE KEY PRINCIPLES OF SPORTS NUTRITION

The three most important principles of a sports nutrition game plan are to stay well-hydrated, to provide fuel for your muscles, and provide optimal recovery after training or competing. Apply these principles correctly and you can maximize the gains from your training and perform at your best!

AFTER PRACTICE/GAME:

Recovery Starts as Soon as You Step off the Court

- To start your muscle recovery, consume foods/fluids with carbs and protein within 30 minutes after exercise
- Sports drinks, energy/protein/recovery bars, bites, gels, and chews make convenient and portable recovery foods
- Be prepared — pack recovery foods in your sports bag

CARBOHYDRATES TO REPLENISH MUSCLE FUEL STORES

CONSUME CARBS TO KICKSTART MUSCLE RECOVERY (ESPECIALLY IMPORTANT IF YOU HAVE ANOTHER EVENT WITHIN 24 HOURS):

Recommended amount of carbs

Within 30 minutes	0.5 x weight (lb) = _____ grams (D)
	1.1 x weight (kg) = _____ grams (D)

AND

Within 2 hours	Repeat same as above OR have a high-carb meal (D)
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Recovery options

Rolls or bagels	PowerBar Recovery beverage
Peanut-butter-and-jelly sandwiches	PowerBar Recovery bar
Salted pretzels	PowerBar ProteinPlus protein bar
Fresh and canned fruits, frozen fruit smoothies	PowerBar Performance Energy bar
String cheese and crackers	PowerBar ProteinPlus Bites
Low-fat chocolate milk	PowerBar Nut Naturals Energy bar

PROTEIN TO BUILD AND REPAIR MUSCLE TISSUE

AFTER VOLLEYBALL GAMES AND PRACTICES: Consume 10–20 grams of protein within 30 minutes

FOR RESISTANCE TRAINING: Protein intake just before and/or as soon as possible after resistance training is essential for optimal recovery, including the growth and maintenance of muscle tissue.

FOR RESISTANCE TRAINING: CONSUME ABOUT 20–40 GRAMS OF PROTEIN AS SOON AS POSSIBLE JUST BEFORE AND/OR AFTER EXERCISE*

One time (in one sitting)	20–40 grams just after exercise (E)
OR	
In two sittings	10–20 grams just before and 10–20 grams just after exercise (F)
OR	
In hourly intervals for up to 3 hours after exercise or until regular meals resume	5–10 grams just after exercise, and then 5–10 grams every hour for 3 hours (G)

* Totals based on 0.18 grams per lb body weight (0.4 grams per kg)

FLUIDS AND SODIUM TO REHYDRATE

AS SOON AS YOU STEP OFF THE COURT, grab your bottle of water and/or sports drink

AVERAGE FLUID LOSS DUE TO SWEATING for volleyball players (summer) is 27 fl oz (800 ml) per hour

FOR EVERY LB LOST, gradually drink 23 fl oz per lb (1,500 ml per kg weight lost)

CONTINUE REHYDRATING until urine is pale yellow like lemonade, not darker like apple juice

Try PowerBar ProteinPlus Bites (1 pouch = 34 g carbs, 20 g protein, 270 mg sodium), PowerBar Recovery bar (1 bar = 30 g carbs, 12 g protein, 180 mg sodium) or PowerBar Recovery beverage (16 fl oz = 40 g carbs, 6 g protein, 500 mg sodium)



PowerBar ProteinPlus Bites

DAILY NEEDS:

AIM FOR A WELL-BALANCED DIET with a variety of carbohydrates, lean protein, and healthy fats

AS A VOLLEYBALL PLAYER, carbohydrates should be the focus of your meals

DRINK UP EARLY: Every morning when you wake up, have a large glass of water

KEEP UP YOUR ENERGY LEVELS: Eat 5–6 meals per day

CONSUME MORE (AT THE HIGHER END OF THE RECOMMENDED RANGE) on more intense training and game days

TOTAL DAILY CARBOHYDRATE RANGE	TOTAL DAILY PROTEIN RANGE
2.7 to 3.6 x weight (lb) = _____ grams (H)	0.55 to 0.8 x weight (lb) = _____ grams (I)
6 to 8 x weight (kg) = _____ grams (H)	1.2 to 1.7 x weight (kg) = _____ grams (I)

NUTRITION PLAN SUMMARY:

PUTTING IT ALL TOGETHER (REFER TO LETTERS FROM PREVIOUS CHARTS)				
	CARBS	PROTEIN	FLUID	COMMENTS
BEFORE	2–4 hrs: _____ (A or B) AND < 1 hr: _____ (C)	Games/practices: Have a moderate-protein meal 2–4 hours before Resistance training: 10–20 grams (F)	Start hydrating 24 hours prior to game/training session Drink 14–20 fl oz of water or sports drink (400–600 ml) 2–3 hours before a game or practice	
DURING	30–60 grams of carbs per hour for exercise >1 hour OR 45–90 grams of carbs per hour for exercise >2 hours	Not required	Drink at least 13–26 fl oz (400–800 ml) per hour in small, frequent doses as play permits Drink about 5 fl oz (150 ml) during a quick stop in play Use sports drinks with 500–800 mg sodium per 32 ounces or 1 liter 1 gulp = ~1 ounce (30 ml)	
AFTER	Within 30 mins: _____ (D) AND Within 2 hrs: _____ (D)	Games/practices: 10–20 grams Resistance training: 20–40 grams (E, F, or G)	Gradually drink 23 fl oz per lb or 1,500 ml per kg weight lost Average sweat loss for volleyball players = 27 fl oz (800 ml) per hour	
DAILY	_____ grams/day (H)	_____ grams/day (I)	Hydrate continuously throughout the day	

This food plan is intended to give general macronutrient and fluid guidelines while you are training and competing. It is not designed to be any particular caloric level. For a personalized daily food plan use PowerBar PowerCoach to determine your caloric needs, and to obtain a daily sports nutrition plan just for you.