

# SPORTS NUTRITION GUIDE

## U.S. VERSION

This guide will provide you with essential tools to optimize performance in all phases of athletic competition and training. It is part of the PowerBar Nutrition Coach Program. Find the complete series on PowerBar.com. Practice the following strategies in training so you have a trial-tested, reliable fueling plan for your competitions and big events.

## BEFORE TRAINING OR COMPETING:



### Start Hydrated

- Start hydrating 24 hours prior to exercise
- 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
- During active warm-up: Drink another 8 fl oz — about 8 swallows/gulps

### What and When to Eat

- Focus on carbs; carb-restricted diets are NOT appropriate for athletes
- If you have more time before exercise (4 hours), eat more; if you have less time (2 hours), eat less to avoid stomach distress
- Eat a carb-based snack 30–60 minutes before exercise to top off fuel stores

#### Carbohydrate-based, pre-exercise meals (2–4 hours before exercise)

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 low-fat cheese in a flour tortilla) and fruit juice

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

Pasta or cheese ravioli with 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, and 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

## Carbohydrates

are the primary muscle fuel for most types of exercise

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 seeking it because of something you have read in this booklet.

**30–60 MINUTES BEFORE TRAINING OR A COMPETITION TO TOP OFF FUEL STORES**

**Recommended amount of carbs**

Aim for about 40–60 grams of carbohydrates

| Quick-to-digest carbohydrate-based options   | Carbs (g) |
|--|-----------|
| Fruit smoothie made with mango/banana/berries and low-fat or nonfat milk or yogurt (8 fl oz or 240 ml) | 30–35 g   |
| 1 serving fresh fruit or 100% fruit juice (1 cup)  | 25–30 g   |
| Low-fat or nonfat yogurt (6 fl oz or 180-ml container)   | 33 g      |
| Fat-free frozen yogurt, gelato, or sorbet (1 cup)  | 45 g      |
| PowerBar Performance Energy bar  | 44–46 g   |
| PowerBar Fruit Smoothie Energy bar   | 43 g      |
| PowerBar Energy Gel  | 27 g      |
| PowerBar Energy Blasts gel filled chews (1 pouch)  | 45 g      |
| PowerBar Energy Bites (4 bites)  | 26 g      |
| Ironman Perform sports drink (20 fl oz)  | 42 g      |

Try PowerBar Energy Bites or PowerBar Energy Blasts gel filled chews along with Ironman Perform™ sports drinks before and during exercise



PowerBar Energy Bites

**DURING TRAINING OR COMPETING:** 

**Stay Hydrated and Fueled**

**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) of water or sports drink each hour
- However, consuming too much fluid during exercise can lead to overhydration, or hyponatremia, which impairs performance and can have serious health consequences
- Calculate your sweat rate so that you know exactly how much fluid to consume during exercise; go to [www.powerbar.com/src](http://www.powerbar.com/src)

**CONSUME A SPORTS DRINK** with sodium when exercising for more than 1 hour or anytime it is hot or humid

**REHYDRATE AND REFUEL THROUGHOUT EXERCISE**

- Be sure to get 30–60 grams of carbs per hour (for exercise lasting 1–2 hours) or 45–90 grams of carbs per hour (for exercise >2 hours) to help delay fatigue and improve performance
- Get your carbs from easy-to-digest sources such as sports drinks, gels, energy chews, and bites
- Consuming multiple sources of carbohydrates during exercise, such as a 2:1 blend of glucose to fructose (PowerBar C2MAX dual source energy blend), can improve performance\*

\*PowerBar C2MAX dual source energy blend is designed to have the same blend of energy sources found in breakthrough studies to deliver 20–50% more energy to muscles than glucose alone. In another study, these energy sources improved athletes' cycling times by 8%.

## 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 to 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 TRAINING OR COMPETING:



#### Recovery Starts as Soon as You Finish Exercising

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

#### CARBOHYDRATES TO REPLENISH MUSCLE FUEL STORES

##### CONSUME CARBS TO KICK-START MUSCLE RECOVERY (ESPECIALLY IMPORTANT IF YOU ARE EXERCISING AGAIN WITHIN 24 HOURS):

###### Recommended amount of carbs

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

###### AND

|                |  |
|----------------|--|
| Within 2 hours | Repeat same as above OR have a carb-based meal |
|----------------|--|

###### Recovery options

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

#### PROTEIN TO BUILD AND REPAIR MUSCLE TISSUE

Whether you're an endurance athlete or you strength train, taking in protein after a workout provides the amino acid building blocks needed to repair muscle fibers that get damaged during exercise and to promote the development of new muscle tissue. Although protein requirements vary between individuals, in general look to consume a minimum of 15–25 grams of protein within an hour after exercise to maximize the muscle rebuilding and repair process.

#### FLUIDS AND SODIUM TO REHYDRATE

**AS SOON AS EXERCISE IS OVER**, grab your bottle of sports drink, recovery beverage, or water — weigh yourself before and after exercise to gauge your net loss of fluids

**FOR EVERY LB LOST**, gradually drink 16–24 fl oz (1,000–1,500 ml per kg weight lost)

**REHYDRATION** will be more effective when sodium is included in the fluids and foods you consume

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

Try PowerBar ProteinPlus™ protein powder drink mix with 20 grams of protein per serving for muscle repair and growth. You work out hard, make it count.



PowerBar ProteinPlus protein powder drink mix

## HEALTHY EATING TIPS FOR ATHLETES:

- AIM FOR A WELL-BALANCED DIET** with a variety of whole grains, vegetables, and fruit; lean protein sources; and healthful fats
- FOR ENDURANCE ATHLETES**, 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 smaller meals per day
- CONSUME MORE CARBS (AT THE HIGHER END OF THE RECOMMENDED RANGE)** on more intense training and competition days

**PUSH YOUR LIMITS:** PowerBar® High Intensity Sustained Release Beta Alanine dietary supplement provides an even supply of beta alanine to muscles. Beta alanine works by increasing muscle carnosine, which buffers muscle acids and reduces muscle burn and fatigue.\* Designed for endurance, strength, and team athletes.



## SPORTS NUTRITION PLAN:\*\*

### PUTTING IT ALL TOGETHER

|               | CARBS  | PROTEIN  | FLUID   |
|---------------|--|--|---|
| <b>BEFORE</b> | <ul style="list-style-type: none"> <li>2–4 hours before exercise, have a carb-based, low-fat, low-fiber meal</li> <li>To top off energy stores, have a carb-based snack 30–60 minutes before exercise (aim for 40–60 grams of carbs)</li> </ul>  | <ul style="list-style-type: none"> <li>2–4 hours before exercise, have a moderate-protein meal</li> </ul>    | <ul style="list-style-type: none"> <li>Start hydrating 24 hours prior to exercise</li> <li>Drink 14–20 fl oz water or sports drink 2–3 hours before</li> <li>Drink another 8 fl oz prior to your practice</li> </ul>  |
| <b>DURING</b> | <ul style="list-style-type: none"> <li>30–60 grams per hour for sessions &gt;1 hour</li> <li>45–90 grams of carbs per hour for sessions &gt;2 hours</li> </ul>   | <ul style="list-style-type: none"> <li>Not required</li> </ul>   | <ul style="list-style-type: none"> <li>Calculate your sweat rate as your guide: go to <a href="http://www.powerbar.com/src">www.powerbar.com/src</a></li> <li>Start with 13–26 fl oz of water or sport drink each hour</li> <li>Drink small amounts about every 15 minutes</li> <li>For exercise sessions &gt;1 hour and when weather is hot and humid, use a sports drink with sodium and carbs</li> </ul> |
| <b>AFTER</b>  | <ul style="list-style-type: none"> <li>Within 30 minutes after exercise, have 0.5 grams of carbs per lb body weight (1.1 grams per kg)</li> <li>Repeat hourly for 3 hours, or transition to carb-based meals or snacks</li> </ul>  | <ul style="list-style-type: none"> <li>Within an hour after exercise, have 15–25 grams of protein</li> </ul> | <ul style="list-style-type: none"> <li>Gradually drink about 16–24 fl oz per lb body weight lost (1,000–1,500 ml per kg weight lost)</li> </ul>   |
| <b>DAILY</b>  | <ul style="list-style-type: none"> <li>Low-intensity exercise: 2.3–3.2 grams of carbs per lb body weight (5–7 grams per kg)</li> <li>Moderate- to heavy-intensity exercise: 3.2–4.5 grams of carbs per lb body weight (7–10 grams per kg)</li> <li>Extremely heavy-intensity exercise: 4.5–5.5 grams of carbs per lb body weight (10–12 grams per kg)</li> </ul> | <ul style="list-style-type: none"> <li>0.5–0.8 grams per lb body weight (1.2–1.7 grams per kg)</li> </ul>    | <ul style="list-style-type: none"> <li>Hydrate continuously throughout the day</li> </ul>   |

### POWERBAR ELITE SERIES

- Try PowerBar High Intensity Sustained Release Beta Alanine dietary supplement daily to enhance high-intensity performance\*
- First 4 weeks, take 2 tablets twice daily
- Thereafter, 2 tablets once daily. Results typically seen in 4–8 weeks

\* These statements have not been evaluated by the U.S. Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

\*\* This plan 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.