



## Performance Nutrition for Swimmers

As swimmers, your body's primary fuel source is **carbohydrate**. Carbohydrates provide glucose which is stored in the body as **glycogen**. During races or long practices your body uses these glycogen stores as fuel. When these stores become depleted, your body begins to use circulating glucose and eventually protein which can result in decreased energy and muscle breakdown.

Adequate **recovery nutrition** after a practice or race will affect your performance at your next practices and competitions making it essential to replenish glycogen stores **after every workout**. The first **30 minutes** after your workout are the most critical for refuelling.

### Workout Nutrition

- Eat a **meal 3-4 hours** before practice and **smaller snacks 1-2 hours** before practice.
- Eat or drink 25-50g (depending on your weight) of carbohydrate **immediately after or within 30 minutes of practice**.
- Add small to moderate amounts of **protein** to your carbohydrate snack to aid in muscle building and repair.
- Choose a **variety** of foods and **limit fat intake**.

Body Weight	Amount of Carbohydrate Needed Post-Practice
≤110lbs	25g
110-125 lbs	30g
125-140 lbs	35g
140- 155 lbs	40g
155-170 lbs	45g
170- 185 lbs	50g
185-200 lbs	55g

Approx. 25g carbohydrate	Fluids	Breads and Cereals	Fruits and Vegetables	Bars	Other
	2 cups skim/1% milk	1 cup cereal	40 baby carrots	1 granola bar	4 crackers with cheese
	1 cup fruit juice	1 slice of whole wheat bread	1 medium whole fruit	½ energy bar (Powerbar®)	2 cups yogurt
	1 cup sports drink	½ bagel	1 cup berries	2 fruit bars	1 Recovery Drink (~30g)

Add **protein** to your recovery snack by including peanut butter, nuts, cheese, meat, fish, eggs or milk to any of the foods above. More protein sources listed on page 2.

Suggestions for 40g + snacks:

- Smoothies (milk/juice, fruit, banana, yogurt)
- Yogurt Parfait (yogurt, fruit and granola)
- Sandwiches (Peanut butter and banana, peanut butter and jam, turkey, tuna, etc)
- Oatmeal (oatmeal with nuts or fruit)

### Fluids:

- Drink lots of **water** before, after and **during** practices.
- Avoid fluids containing caffeine (coffee, tea, pop or energy drinks) as they can delay recovery and further dehydrate you.
- Add a **carbohydrate source** to your water **during** high intensity training or practices longer than 90 minutes.
  - **Sports drinks** (Gatorade®/Powerade®) are easily digested and absorbed quickly but can be too concentrated. Diluting a sports drink with water (~50% sports drink or less) can keep the body fuelled and hydrated.
- Recovery drinks such as Ensure® or Carnation Instant Breakfast® can make effective pre-workout and post-workout recovery snacks that contain approximately 30g of carbohydrate and 13g of protein.



## Competition Nutrition

- **Rehydrate immediately after each race.** Water is an excellent choice during competitions.
- **Eat a quick recovery snack** immediately after your races (examples below).
- **Choose foods you eat often.** Important swim meets are not the best time to experiment with new foods. During training, take note of what and how much you eat, when you eat it and how you felt after to help you to develop an eating plan that works best for you.
- **Stay away from high-sugar, high-fat concession stand food.** While some concession stands have healthier options most of them contain high-fat, high sodium, high-refined sugar foods that can spike your blood sugar and leave you tired and sluggish for your races. While concession stand food is quick and easy, planning ahead and bring foods from home will result in much better performances.

### Quick Recovery Foods

Below are examples of high carbohydrate (High Glycemic Index) foods to eat if you have **less than 1 hour** before your next swim. These foods are also good examples of quick snacks to eat immediately after your race to replenish your glycogen stores. Food is listed in approx. 25g portions.

<b>Fruits and Vegetables</b>	½ cup apple sauce* 1 medium whole fruit (banana, pineapple)* ½ cup canned fruit* ¼ cup raisins* 1 small baked potato* 2 cups melon* 1 fruit or granola bar	Add a protein source to * foods.  <b>Protein Sources:</b> 2 tbsp nut butter ½ cup nuts 1 cup milk 1 cup yogurt 2 ounces cheese 1 cup cottage cheese 3 ounces meat 1 egg ½ cup tofu 3 ounces fish 2 slices deli meat (try to avoid as is often high in salt)
<b>Cereal, Bread, Crackers</b>	½ cup of cereal and milk ½ bagel with nut butter 4 crackers and cheese 1 slice of whole wheat bread with nut butter 1 waffle* 2 (5 inch) pancakes*	
<b>Liquids</b>	1 cup juice* 2 cups sports drink (Powerade®, Gatorade®)* 1 cup chocolate milk	

### Example Competition Meal Plan

Event	What to Eat	When to Eat
Early Morning Warm Up	<i>Breakfast:</i> focus on carbohydrates Examples: 1 cup raisin bran with milk and 1 banana 2 slices of whole wheat toast and peanut butter and 1 apple.	Aim for 1 hour before warm-up
Morning/Afternoon /Final Heats	<i>Recovery Snack:</i> liquid + quick recovery snack + protein Examples: 1 cup Gatorade, 1 fruit bar and handful of nuts 1 cup water, ½ bagel with peanut butter	Immediately after all events
Late Afternoon	<i>Light Meal</i> Examples: water, turkey sandwich and carrots sticks juice, pasta and meat sauce	Aim for 2 hours before your afternoon/final events

