Client Name: Date:

RDN/NDTR: Email: Phone:

Fueling for Strength Athletes

Strength athletes should prioritize calories, carbohydrate, and protein. Get enough calories and carbohydrate for daily activity and intense training or competition, along with sufficient protein to build and repair muscle.

Tips

Use these suggestions to stay fueled and hydrated for your best performance.

Meal Planning

- Follow a steady eating routine each day.
- Select nutrient-rich foods and drinks.
- Cut back on highly processed foods, cured meats, fried meats such as fish sticks and chicken wings, creamy sauces, gravies, biscuits, croissants, doughnuts, and pastries.
- Choose calorie-rich drinks, including 2% or whole milk, chocolate milk, and 100% fruit juice when your calorie needs are very high.
- Build balanced meals with carbohydrate, protein, and healthful fats.
    - Have carbohydrate and protein before and/or after training. The Food and Drink Before, During, and After Training/Competition table gives examples of meal and snack timing around sport.
    - Include fats that support heart health, such as fish, olive oil, avocado, nuts and nut butters, flaxseed, and chia seed.

Carbohydrate Guidance

Carbohydrate fuels the training that builds and maintains muscle size and strength. It also helps spare muscle tissue from being used for energy. Aim for 5-7 grams per kilogram of body weight each day, based on your activity. Your sports RDN can help identify the carbohydrate amount suited to you.

Protein Guidance

Meeting your daily protein goal supports gains in muscle size and strength. Aim for 1.4-2.0 grams total protein per kilogram of body weight daily, based on activity level. Your sports RDN can help identify the protein amount suited to you.

Daily Protein Timing

Distribute protein regularly throughout the day to help meet your daily requirement.

- At meals and after every workout: Aim for about 15-25 grams protein
- Evening snack (1-3 hours before bed): Have a protein-rich snack providing about 15-25 grams to help preserve muscle mass.

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Hydration Guidance

Drink regularly through the day, with meals and snacks and during training. Aim for pale yellow urine.

- Have water, unsweetened tea, or coffee during the day. Choose water or sports drinks before, during, and after exercise.
- Each day, drink 0.5 ounces of fluid per pound of body weight, plus the fluid you drink in training. For example, someone weighing 150 pounds should aim for at least 75 ounces total fluid daily.
- Drink to thirst; drink more if you sweat heavily.

Supplement Guidance

Whole foods are the preferred sources of carbohydrate, protein, vitamins, and minerals. Dietary supplements can also offer convenient, practical calories and protein.

Supplements may help when calorie needs are high, nutrients are deficient, fresh food access is limited, food safety is a concern, or you are traveling.

Ask your sports RDN about buying and using safe, effective supplements. Select only products with third-party verification or a Nutrition Facts label on the package.

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Food and Drink Before, During, and After Training/Competition

These examples illustrate nutrient timing for training and competition. Try the schedule during training to check tolerance before competition day. Your sports RDN can tailor food choices and amounts to your needs.

When to Fuel	Suggested Fuel
	Fuel Before Training and Competition
3-4 hours before an event	Eating 3-4 hours before training or competition, or between events, allows time to digest. Have a meal rich in carbohydrate and protein, with moderate fat and fiber. ■ 2-3 scrambled eggs, 1 cup oatmeal with 2 tablespoons peanut butter, 2 tablespoons dried fruit, 1 teaspoon honey OR ■ 1 grilled chicken or shrimp wrap in a flour tortilla, 1 ounce pretzels, 1 cup berries, and 1 cup soy milk **Hydration** Choose water or a sports drink according to thirst, weight lost in the previous training session, or urine color. ■ When urine is clear or pale yellow, let thirst guide drinking. ■ For dark urine, drink electrolyte-containing fluids beyond what thirst prompts.
30 minutes to 1 hour before an event	Choose easy-to-digest foods with plenty of carbohydrate, moderate protein, and little fat or fiber. ■ ¼ cup dried fruit OR ■ 1 cup pretzels OR ■ ½ cup applesauce or another fruit puree OR ■ 1 meal-replacement bar low in fat and fiber **Hydration** Have 8-12 ounces of water or sports drink
	During Training or Competition
Events under 1 hour	Stay hydrated with water
Events lasting over 1 hour	Choose foods rich in carbohydrate and low in protein, fat, and fiber. Include sodium and potassium to replace electrolytes lost in sweat. ■ 16-20 ounces sports drink OR ■ 1 piece of fruit OR ■ 1 cup pretzels OR ■ 1 meal-replacement bar low in fat and fiber **Hydration** Electrolyte-containing fluids help prevent dehydration, support performance, and replace electrolytes lost in sweat. Use thirst or sweat rate to guide how much you drink.

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When to Fuel	Suggested Fuel
	After Training or Competition
Within 60 minutes of finishing If tomorrow is a rest day, include recovery foods in your next meal after the event.	Have a recovery snack or meal to aid muscle repair. Recovery foods provide carbohydrate and lean protein with little fat or fiber. Protein promotes muscle repair, while carbohydrate replaces glycogen, the stored muscle carbohydrate used in training or competition. Carbohydrate also helps spare protein from being burned for energy. Aim for 15 to 30 total grams protein and 50 to 80 total grams carbohydrate. ▪ 4 ounces grilled chicken plus 1½-2 cups rice or potatoes OR ▪ 1 sandwich with 2 pieces of bread, 2 tablespoons nut butter, 1 banana, and 2 teaspoons honey OR ▪ 12-16 ounces 2% chocolate milk or soy milk plus 1 piece of fresh fruit OR ▪ 1 cup cottage cheese plus ½ cup dried fruit or trail mix OR ▪ 1 bag of pretzels or pita chips (2.0-2.5 ounces) with 1-2 ounces cheese OR ▪ 1 bottled shake providing protein and carbohydrate plus 1 piece of fresh fruit OR ▪ 1 fruit smoothie blended with protein powder **Hydration** Use thirst or sweat rate to guide water, sports drink, or 100% juice intake.

Carbohydrate- and protein-rich snacks also work between meals or when you feel hungry. Try these options:

- ¾ cup Greek yogurt with ½ cup sliced fruit and ¼ cup walnuts
- 1 shake providing 30 grams protein plus 1 piece of fresh fruit
- 1 shake providing 20 grams protein, 1 piece of fresh fruit, and 2 tablespoons nut butter
- 1 ounce jerky with 1 piece of fresh fruit
- 2 hard-boiled eggs with ½ cup hummus and ½ cup raw vegetables

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Foods and Drinks to Limit Before, During, and After Training/Competition

When you eat and drink can affect performance. This table suggests foods and beverages to limit before, during, and immediately after training or competition.

When	Foods and Drinks to Limit
In the 2 hours before training/competition	▶ Fat-rich foods, including fried foods, fatty meats, rich sauces/creams, and desserts ▶ Fiber-rich foods, including broccoli, cauliflower, beans, whole grain breads, cereals, and popcorn ▶ Uncooked or raw meat ▶ Alcohol ▶ Sugar-sweetened drinks, including soft drinks, fizzy beverages, fruit drinks, and sweetened tea ▶ Fat-rich dairy foods, including whole milk and cheese
While training or competing	▶ Fat-rich foods ▶ Fiber-rich foods ▶ Uncooked or raw meat ▶ Alcohol ▶ Protein-rich foods, including meat, beans, eggs, and protein bars ▶ Sugar-sweetened drinks, including soft drinks, fizzy beverages, fruit drinks, and sweetened tea ▶ Dairy foods, including milk, cheese, and yogurt
In the 1 hour after training/competition	▶ Fat-rich foods ▶ Fiber-rich foods ▶ Alcohol

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Example Meal Plan

Create a personal meal plan using this form.

Meal	Menu
Breakfast	
Lunch	
Dinner	
Snack	

Notes:

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