Client Name: Date:

RDN/NDTR: Email: Phone:

Fuel for Track and Field Athletes

Track and field spans brief events of varying high intensities, including short sprints and field events, as well as events demanding maximum effort for several minutes such as longer sprints and distance runs. Even brief events can require hours of training each day, sometimes in several sessions. Athletes may enter multiple events at one meet.

Hard training requires enough energy. Your needs vary with age, sex, event type, the number of events you enter, and the hours spent training and competing. Genetics, training, and motivation affect track and field performance more than nutrition. Still, nutrition helps you maximize the muscle mass needed for power events.

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Tips

- Have 5 to 6 nutrient-rich meals each day to support performance and reach your body composition goals.
- Eat at least 5 servings of fruit and vegetables daily for vitamins and minerals.
- Make carbohydrate the main part of your diet. Carbohydrate needs range from 3 to 12 grams per kilogram of body weight, depending on your sport, position, daily training load, and overall goals. Your sports registered dietitian nutritionist (RDN) can help choose the intake suited to you.
  - Select quality carbohydrate foods, such as whole grain cereals and breads, pasta, rice, starchy vegetables, dried or whole fruit, and low-fat yogurt and milk.
  - Limit refined carbohydrates and sweets, including cookies, pastries, cakes, candy, sugary soft drinks, fruit drinks, sweetened tea, and specialty coffee drinks.
- Protein supplies the materials to build muscle mass and support healthy growth and development. Estimated daily protein needs range from 1.2 to 2.0 grams per kilogram of body weight, depending on training status, training phase, and individual circumstances. Your sports RDN can explain the protein intake that meets your needs.
  - Protein timing matters when building muscle. Within 1 hour after training, eat protein with carbohydrate to supply amino acids, the building blocks of protein, for muscle growth and repair.
  - Try to have protein about every 3 hours in the day, including 1 hour before bed.
  - Protein above the recommended amount will neither speed muscle growth nor increase muscle mass.
- Include healthy fats to provide enough energy for training and help your body absorb vitamins. Fat should supply 20% to 35% of total calories. As training volume rises, your need for dietary fat also grows. Very high or very low fat intakes offer no performance advantage. Your sports RDN can help you determine the fat intake that meets your needs.
  - Healthy choices include olive oil, olives, nuts and nut butters, avocado, and plant oils, including canola oil.

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Carbohydrate and Protein Portions

Using serving sizes for carbohydrate and protein foods can make it easier to choose enough fuel before, during, and after training, and at meals and snacks. Your sports RDN can guide food portions and eating times to support your best sport performance.

Carbohydrate sources	Portion (1 serving = 15 grams carbohydrate)
Bread	1 slice
Tortilla	1, 6 inches
Corn	½ cup
Mashed potatoes	½ cup
Baked or sweet potato	½, medium
Rice	1/3 cup
Popcorn	3 cups
Apple	1, small
Grapes	15
Tangerine	2
Raisins	2 tablespoons
Orange juice	½ cup
Milk or yogurt	1¼ cups

Protein sources	Portion (1 serving = 7 grams protein)
Cheese	1 ounce
2% milk	1 cup
Plain yogurt	1 cup
Cottage cheese	¼ cup
Egg	1 whole
Beef, pork, chicken, turkey, or fish	1 ounce
Tofu	¼ cup
Nuts, seeds	2 tablespoons
Peanut butter	2 tablespoons
Black beans or kidney beans	½ cup, cooked

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Hydration

Track and field demands sustained high power, and good hydration helps support peak output. Events take place indoors, where air can be warm, and outdoors in sun, heat, and humidity. These conditions raise dehydration risk.

Water suits most athletes best. Keep a full water bottle nearby.

Hydration Tips

- Before practice or a meet: Aim for about 2 cups (16 ounces) of water 2 to 3 hours before starting. Drinking sodium-containing fluids and/or eating salty snacks encourages thirst and helps retain fluid.
- Just before training or a race/event: Sip 4-8 ounces of water or sports drink 10 to 20 minutes beforehand, as tolerated.
- During practice: Prevent excessive dehydration, which occurs when sweat-related weight loss reaches 2% or more of starting body weight. Weighing before and after practice shows the percentage lost and helps you assess fluid intake during training and competition. Remember that training-session weight loss is water, not muscle or fat tissue.
  - Drink enough to keep total body fluid losses below 2% of your body weight.
  - Your sports RDN will set personal hydration goals based on sweat rate, training status, temperature, humidity, and the intensity and length of play.
- During competition: Track and field events are often brief, with no chance to take in fuel or fluids, making hydration before competition essential.
  - When several heats or events are separated by only short breaks, sip water or sports drink between events to replenish fuel and fluids.
- In hot, humid conditions: Prevent excessive dehydration with drinks containing electrolytes, including sports drinks.

For lengthy practices, games, or events, sports drinks are a useful option. They supply carbohydrate, sodium, and potassium in a balance that helps replace losses. Use the same drinking schedule as for water and pay attention to your body. Drink when thirsty, and watch urine frequency and color. Frequent urination throughout the day with light-straw-colored urine usually indicates adequate fluid intake.

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Meals Before, During, and After Training or Competition

These examples show how to time fuel around training or competition. Try the suggestions in training first to check that your stomach tolerates the schedule before competition day. Your sports RDN can tailor food choices and amounts to your needs.

When to Fuel	Suggested Fuel
	Fuel for Training and Competition
3-4 hours before an event **3-4 hours between events**	A meal 3-4 hours before training or competition, or between events, gives you time to digest. Choose plenty of carbohydrate, little fat, and moderate protein. ■ 6-inch turkey sub, 1 ounce tortilla chips, 1 piece of fruit, and 1 cup 2% milk OR ■ 1 grilled shrimp wrap in a flour tortilla, 1 ounce pretzels, 1 cup berries, and 1 cup soy milk
1-2 hours before an event **1-2 hours between events**	Choose a snack high in carbohydrate, low in fat, and moderate in protein 1-2 hours before training or competition, especially if you could not eat earlier. Between events, snack as tolerated to restore muscle fuel and prepare for the next event. Larger snacks are generally easier to tolerate when you have 2 hours. ■ 1 bagel with 1 tablespoon peanut butter OR ■ 1 granola bar providing 30-40 grams carbohydrate and 8-10 grams protein OR ■ 5-10 crackers plus 1 ounce cheese OR ■ 1 cup cereal, 1 cup 2% milk or soy milk, and 1 banana OR ■ ¾ cup yogurt plus ½ cup fruit OR ■ 12-16 ounces fruit smoothie containing no more than 8 grams protein OR ■ 8-12 ounces 2% chocolate milk plus 1 banana OR ■ 2 hard-boiled eggs and a low-protein/high-carbohydrate granola bar
Under 1 hour before an event or with 1 hour between events	Choose carbohydrate foods or drinks that digest quickly and easily. ■ Sports drinks (drink as tolerated; no set amount is suggested) OR ■ 1 piece of fruit such as a banana or orange
	During Training or Competition
Events lasting over 1 hour	During training or competition, have a snack with 30 to 60 grams carbohydrate each hour. ■ Sports drinks or sports foods, such as gel packets, gum packets, energy chews, or sport beans OR ■ 1 piece of fruit OR ■ 1 cup pretzels
	After Training or Competition
30 minutes after the event if another event follows the next day **Include recovery foods at your next meal if tomorrow is a rest day.**	Have a snack rich in carbohydrate and protein. Protein supports muscle repair; carbohydrate replenishes glycogen, the carbohydrate stored in muscle, used during training or competition. Aim for about 15 to 30 grams protein and 1.0 to 1.2 grams carbohydrate per kilogram of body weight. Your sports RDN can help select the right amounts. ■ 6-inch turkey sub OR ■ 1 grilled chicken sandwich OR ■ 12-16 ounces 2% chocolate milk or soy milk OR ■ 1 cup cottage cheese plus 1 piece of fruit OR ■ 10-15 crackers with 1-2 ounces cheese

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FAQs

Can lactic-acid-buffering supplements help track and field athletes?

Lactic acid, an acid formed in muscle, can accumulate during very intense events that use anaerobic energy. The body buffers excess acid naturally, and supplements such as sodium bicarbonate can add buffering and reduce fatigue. Benefits may be greatest for 30-120-second events, for untrained people, or early in an athlete's training. The dose used is 0.2-0.4 grams per kilogram of body mass, taken 1 to 2 hours before training or competition. Bicarbonate can upset the stomach. Try it first in training rather than at a competition.

College and elite athletes are tested for prohibited drugs. Some dietary supplements have contained banned substances. Track and field athletes can find the prohibited list at www.wada-ama.org.

Which easy breakfasts can fuel morning practice?

For track and field, a nutritious breakfast combines quality carbohydrate and protein. These simple options provide carbohydrate for energy and protein to help maintain energy and focus:

- 1 packet instant oatmeal plus 2 tablespoons peanut butter and 1 piece of fruit
- 1 hard-boiled egg with 1 slice whole grain toast and 1 cup orange juice
- 2 toaster waffles, each with 1 tablespoon almond butter or peanut butter and half a sliced banana
- 1 cup low-fat milk and 1 slice whole grain toast spread with ¼ mashed avocado

Notes

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