

Eating Before Exercise

Athlete Scenario

The day of a football game, I feel nervous and often skip lunch. I know I need to eat something but pre-game jitters make it hard to keep food down. What types of meals and snacks will supply me with enough energy to perform well without upsetting my stomach.

Optimizing Pre-Exercise Nutrition

- Consume a carbohydrate-rich meal or snack before exercise to increase energy availability and speed post-exercise recovery. Based on individual tolerance, aim for a maximum of 1 g carbohydrate/kg body weight times the number of hours before exercise (e.g. maximum of 300 g for a 100 kg athlete if eating 3 hours pre-exercise).
- Include small amounts of protein in the pre-game meal. Adequate protein before exercise may help reduce post-exercise muscle soreness.
- Choose foods that are low in fat and fiber to ensure optimal tolerance.
- Prevent dehydration by consuming fluids in the hours leading up to exercise.

Pre-exercise Foods & Fluids

1-4 Hours Before Exercise (*adjusted based on food preferences, exercise intensity, and duration of activity*)

- Peanut butter and honey on bread + fruit & yogurt smoothie
- Oatmeal with brown sugar and almonds + banana
- Low-fat cottage cheese or yogurt + granola + fruit
- Lean hamburger or chicken on bun + side salad + fruit & yogurt parfait
- Turkey and Swiss sandwich + fruit

30-60 Minutes Before Exercise

- Piece of fruit, crackers or jam sandwich
- Sports drink or water (aim for sports drink if last meal was over 3 hours prior)
- Sports gel, sports bar, sport beans or gummies
- Fruit puree pouch such as applesauce

Written by SCAN registered dietitian nutritionists (RDN) to provide nutrition guidance. The key to optimal meal planning is individualization. For personalized nutrition plans contact a SCAN sports dietitian or Board Certified Specialist in Sports Dietetics (CSSD) by accessing "Find a SCAN Dietitian" at www.scandpg.org

Tips to Take With You

1. Practice makes perfect. Experiment with different foods/beverages during practice and lower level competitions to determine what works best for you. Liquid meal replacements and sports food may be better tolerated than whole foods.
2. Build meals that are carbohydrate-rich, moderate in protein, and low in fat and fiber to optimize digestion and energy availability.
3. Drink plenty of fluids and consume fluid-rich foods before exercise.

Contact SCAN

www.scandpg.org
800.249.2875

Eating During Exercise

Athlete Scenario

During marathons, I perform well at the beginning but struggle toward the end. I use sports drinks and energy gels, but after about 2 hours, I get stomach cramps and I hit a wall. How can I improve my nutrition plan to help my performance during the marathon?

Goals of Nutrition During Exercise

- Provide fuel early and often to boost performance and improve recovery. Aim for 30-60g of carbohydrates per hour for endurance exercise beyond 60 minutes.
- Prevent dehydration by starting activities well hydrated and consuming fluids during activity. Weigh before and after exercise to determine how much to replenish (See Exercise Hydration fact sheet for more details).
- Determine the best combination and amount of fuels for you (e.g. liquids, sports foods, whole foods) to sustain energy and minimize gastrointestinal (GI) discomfort.

During Exercise Foods & Fluids

- Begin fueling and hydrating within the first 15 minutes of extended exercise to prevent depletion and dehydration. Fluids consumed with carbohydrate-rich foods speed fuel transport to muscles.
- Based on preference and GI tolerance, consume products with multiple sources of carbohydrate (e.g. glucose + sucrose + fructose) that allow for greater rates of absorption.
 - Sport nutrition products that contain carbohydrate and electrolytes: sports drinks, gels, beans, or chews
 - Easily digested carbohydrate-rich foods: banana, bread with jam/honey, dried fruit, fruit/veggie puree pouch, pretzels, small baked potatoes, rice cakes, bite-sized pieces of granola or sports bars
- Examples of ~30g carbohydrate:
 - Energy gel/chews (22-27g)
 - Sport drink (~28g/16oz)
 - Medium banana (~27g)
 - 1oz pretzels (~23g)
 - Fruit puree pouch (~20g)

Tips to Take With You

1. Start with a full tank. Begin exercise well-hydrated and with adequate muscle fuel (carbohydrate).
2. Begin consuming both carbohydrate and fluids early to preserve energy stores and prevent dehydration.
3. A sports registered dietitian nutritionist (RDN) can provide suggestions for food/fluid combinations during training sessions based on your specific needs

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Eating for Recovery

Athlete Scenario

The day after a hard soccer practice my legs feel heavy and sluggish. My performance the next day suffers because I'm sore and tired. I usually drink water or a sports drink during practice and games. What can I do so I have more energy at practice to perform better?

The Goals of Nutrition Recovery

- Replace fuel (carbohydrate) utilized by muscles during training. Consume a snack or meal within an hour following training or competition.
- Restore fluid and electrolytes (sodium and potassium) lost through sweat; weigh yourself before and after exercise to determine how much to replenish (see Exercise Hydration fact sheet for more details).
- Eat 15-25 grams of high-quality protein to aid in repair of damaged muscle tissue and to stimulate muscle protein synthesis.

Recovery Fluids and Snacks

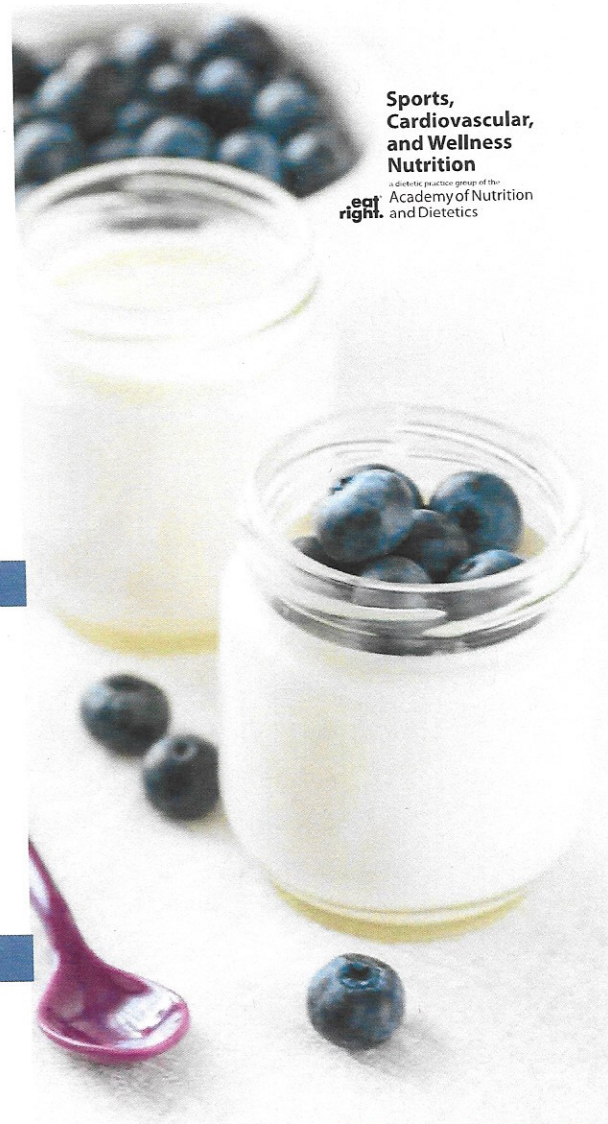
- Smoothie with low-fat milk + spinach or kale + frozen fruit
- Graham crackers with peanut butter + low-fat chocolate milk + banana
- Carbohydrate-electrolyte sports drink + sport bar containing carbohydrate & protein
- Whole wheat pita chips + hummus + 100% juice
- Greek yogurt + berries + whole grain cereal + water
- Dried fruit & nut trail mix + water

Recovery Meal Ideas

- Sandwich wrap with turkey & spinach + fruit bowl + low-fat milk
- Rice bowl with beans cheese, salsa, avocado + whole grain tortilla chips or whole wheat tortilla
- Grilled protein such as fish, chicken or steak + broccoli, bell peppers, carrots + roasted sweet potatoes
- Stir-fried tofu & veggies + quinoa + bowl of soup
- Veggie omelet + whole wheat toast + apple slices

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Tips to Take With You

1. Recovery nutrition and hydration are particularly important if you have 2 training sessions/day or your next training session is within 8 hours.
2. Plan ahead and keep recovery fuel readily accessible in your gym bag.
3. If you do not have an appetite or have minimal time following a training session, choose liquids (e.g. smoothies) or start with a small snack that contributes to your recovery goals.

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