All athletes, from time to time, have to contend with eating meals away from home. Maintaining good nutritional practices while traveling to and from events may affect an athlete’s health and athletic success. Unfortunately, many athletes have poor nutritional knowledge, resulting in inadequate intakes of certain nutrients and poor dietary practices. More athletes get nutritional information from athletic trainers and strength and conditioning coaches than from dieticians. Thus, the purpose of this report is to provide the athletic trainer or therapist with practical suggestions and recommendations for the traveling athlete to meet his or her nutritional needs when on the road.

Regardless of where an athlete eats when traveling, it is important that he or she maintains a healthy training and competition diet. The key difference between the diets of athletes and the general population is that athletes typically require more fluid and calories to fuel a higher volume of physical activity. A diet high in complex carbohydrates and low in fat, especially saturated fat, is widely recommended for the general population. Sports nutrition experts recommend a diet for athletes that is 55–65% carbohydrates and about 15% protein, with the remainder of calories from fat. Ivy and Portman recommend a slightly lower carbohydrate intake and higher protein intake for strength athletes (41–48% carbohydrate, 19–26% protein, and 33% fat) and stress the importance of eating natural, whole foods.

**Hydration**

Travel often involves being in a pressurized airplane or air conditioned car and staying in an air conditioned hotel room. These environments all have a tendency to promote dehydration. Even small amounts of dehydration, as little as 2% of body weight, may have a negative effect on athletic performance. Thus, it is prudent to have athletes travel with a water bottle and to encourage them to drink plenty of fluids to stay as hydrated as possible when traveling.
The Institute of Medicine recommends that the average adult male and female should consume 3.7 L/day (16 cups) and 2.7 L/day (12 cups) of water, respectively. Because about 80% of water intake comes from beverages, this corresponds to drinking 8–12 cups of water/day. This recommendation is for healthy, sedentary, or moderately active people living in a temperate environment. For athletes, the fluid losses associated with exercise necessitate an even greater fluid intake. The American College of Sports Medicine (ACSM) and the National Athletic Trainers’ Association (NATA) recommend prehydrating several hours before competition, drinking during extended periods of exercise, and rehydrating after the event in an effort to maintain precompetition body weight\(^{12,13}\) (Table 1). Pre-hydration involves drinking 500–600 mL (17-20 oz)\(^8\) or 5-7 mL/kg of body weight of water or sports drink several hours before competing.\(^5\) The goal of drinking during exercise is to avoid water loss that exceeds 2% of body weight. The amount and rate of fluid needed during exercise depends on many factors, such as body size, sweat rate, and exercise duration, but 8 oz every 15 minutes is a general guideline.\(^5,6,12,13\) When rehydrating, athletes should drink 16–24 oz (450–675 mL) of fluid for every pound of body weight lost.\(^5\)

### Table 1. Hydration Guidelines

<table>
<thead>
<tr>
<th>When</th>
<th>How Much Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughout the day</td>
<td>Enough to maintain body weight</td>
</tr>
<tr>
<td>Pre-exercise</td>
<td>5–7 mL/kg body weight or 500–600 mL about 3 hours before exercise</td>
</tr>
<tr>
<td>During exercise</td>
<td>200–300 mL every 15 minutes; a 6-8% CHO sports drink for events &gt; 1 hour</td>
</tr>
<tr>
<td>Post-exercise</td>
<td>450–675 mL per pound (0.5 kg) of body weight lost</td>
</tr>
</tbody>
</table>

### Table 2. Nutrient Timing

<table>
<thead>
<tr>
<th>When</th>
<th>What Nutrients</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-event meal; 3-4 hours before competition</td>
<td>200–300 g CHO, moderate protein, low fat, plenty of fluid</td>
<td>Glass of grape juice, bowl of oatmeal, 2 pieces of toast with jelly, sliced peaches with skim milk</td>
</tr>
<tr>
<td>During event; for events &gt; 1 hour</td>
<td>0.7 g CHO/kg of body weight (30-60 g/hour); 6-8% CHO solution</td>
<td>About 250 mL of sports drink every 15 min; sports gel and/or energy bar as additional supplement for long events</td>
</tr>
<tr>
<td>Post-event; within 45 minutes of completion</td>
<td>1.0–1.5 g CHO/kg body weight at 2 hour intervals up to 6 hours</td>
<td>Sports drink with 4:1, carbohydrate:protein ratio or peanut butter and honey sandwich on wheat bread</td>
</tr>
</tbody>
</table>

### Snacks and Nutrient Timing

Traveling can be unpredictable, so athletes should always have plenty of snacks available. A flat tire or a delayed flight could easily result in a missed meal, which could affect an upcoming performance. Depending on the travel circumstances, athletes should consider traveling with a small cooler for easy and convenient access to beverages and foods.

Sports nutrition experts recommend that athletes have multiple small meals per day (five or six feedings) in order to meet the increased caloric need that accompanies physical training and competition.\(^5,7,14\) Traveling with snacks helps to insure that caloric needs are being met, despite unpredictable travel delays. Snacks should be healthy and nutrient-dense. Fresh fruit and vegetables, fruit juices, energy bars, bagels, nuts, and raisins are recommended traveling snacks.\(^6,15\)

A critical period of nutrient timing is the pre-competition meal. Sports nutritionists recommend that the precompetition meal should consist of about 4–5 g/kg of body weight of easily digestible carbohydrates (about 200–300 g), should be moderate in protein and low in fat, and should be ingested 3–4 hours prior to competition.\(^5,7,8\) A meal high in carbohydrates is especially important prior to competition, as it will be digested faster than a meal high in fats, and it will help to ensure that the body’s glycogen stores are maximized.\(^5\) An example of a precompetition breakfast might include pancakes, yogurt, and juice. Benardot\(^6\) recommends that this meal is completed 90 minutes prior to competition, but that carbohydrate ingestion should continue until the start of competition by sipping on a sports drink every 10–15 min. Table 2 provides a summary of nutrient timing.

A cooler stocked with food is also a convenient way to replenish energy stores immediately after competition. Most athletes usually do not feel like
eating immediately after competition; however, it is
during this time that the muscle cells are most sensi-
tive to insulin and optimally prepared for glycogen
resynthesis and repair. Ivy and Portman\textsuperscript{9} call the 45
minutes immediately after a workout the “anabolic
phase” of recovery and the most critical time period for
providing the body with nutrients. Waiting two hours
after a competition to ingest food will significantly
retard the replenishment of muscle glycogen stores
and synthesis of protein. They recommend ingesting
1.5 g/kg of carbohydrate with 0.3–0.5 g/kg of protein
during this 45-minute window. A cooler supplied with
peanut butter sandwiches, yogurt, and chocolate milk
will approximate this 4:1, carbohydrate:protein ratio
and stimulate the recovery process. Feedings should
continue every 2 hours until total carbohydrate intake
has reached 8-10 g/kg over a 24 hour period.\textsuperscript{16}

**Restaurant Alternatives**

Competitive events away from home do not neces-
sarily require that athletes eat in restaurants. When
athletes travel extensively by vehicle and spend many
days away from home at a time, packing a portable
slow-cooker makes a lot of sense. This has been a
common practice for years among cyclists who travel
extensively on the national race circuit. If traveling with
a slow-cooker is not an option, a hotel with a kitchen
or cooking area in the room may be an alternative.

Cooking or making sandwiches when traveling
has many advantages. First, there is ultimate control
over what to eat, and it eliminates the worry about
“mystery ingredients” in the restaurant food. Second,
travel plans and competition times sometimes do not
coincide with restaurant hours of operation. The abil-
ity to prepare a meal in the room offers more options
for when to eat, thereby adding flexibility to the travel
and training schedule. Finally, preparing meals is often
more cost-efficient.

Grocery store markets can provide fresh meals
at a lower cost than restaurants can. Many grocery
stores have delicatessens and/or soup and salad bars.
For all-day events, such as tournaments and track-
and-field meets, a stop at the supermarket to stock
up on complex-carbohydrate, low-fat whole foods for
the day is a healthy alternative to eating concession
stand food. A grocery store offers a nearly unlimited
choice of fresh fruits and vegetables, sandwich items,
deli items such as tuna salad or baked chicken, along
with bottled water, sports drinks, or juices. For day-long
tournaments that provide little time for the athlete to
eat and properly digest food between multiple compet-
titions (e.g., wrestling tournaments or track and field
meets), purchasing a liquid meal supplement, such as
Ensure or Boost, can provide much needed and easily
digestible calories.

**Restaurants**

In most cases, the traveling athlete will be eating meals
in restaurants. Restaurant eating can present special
challenges that may hinder performance. For example,
eating unfamiliar food in an unfamiliar location could
lead to gastrointestinal distress. Not being able to locate
a restaurant early enough to properly digest breakfast
before the start of an early-morning event could result
in diminished glycogen stores. However, with some
planning and the right food selections, optimal nutri-
tion can be obtained. The following are some sugges-
tions specific to eating in a restaurant.

- **Make a reservation.** Have an itinerary and an
  approximate time when the athletes will arrive at
  the restaurant. Call the restaurant to double check
  the hours of operation and availability. Plan travel
  and competition or practice time accordingly. This
  preplanning will help avoid poor food selection at a
  buffet or missing a meal.

- **Look at the menu and “food facts” beforehand.** Part
  of planning for a competitive event away from home
  can include advance acquisition of a menu from
  the restaurant. Menus for restaurants can often be
  found online at the restaurant’s website. Foods low
  in sodium or fat are often labeled as “heart healthy”
on the menu. This can help in making a healthy
  food selection. Additionally, ask the chef to make
  recommendations that meet the athletes’ nutritional
  needs. If the management of a restaurant is alerted in
  advance, the chef can prepare a meal for the entire
  team, such as a pasta dinner.

Athletic teams frequently choose quick-service
chain restaurants. The nutritional content of food
obtained from fast-food restaurants can be accessed
on their corporate websites (under “nutrition facts”
or a “nutrition guide” heading). The nutrient content
of about 26,000 menu items from more than 20
popular quick-service food chains can be accessed
on the Internet at www.foodfacts.info. The nutri-
tent content of the menu items can be assessed in
advance to aid in making a well-informed decision
before arrival at the restaurant. Athletic trainers and therapists can print the menu, circle the healthiest items, and provide the menu to the athletes.

- **Buffets are often a good choice.** The buffet might be too much of a temptation for an unsupervised or undisciplined athlete who lacks nutritional knowledge and is likely to over-indulge and make poor nutritional choices, but buffet-style restaurants also offer great advantages. Buffets allow individuals to select portion size and to select a balance of nutrients. This may be an especially attractive option when traveling with a team whose members have vastly different caloric needs and food preferences. Additionally, buffets often have a wide variety of food choices, which allows athletes to get what they want while avoiding unhealthy items that might otherwise be included in an entrée. All-you-can-eat buffets may be more cost-effective than other restaurants for athletes who require large caloric consumption.

### Food Selection

Budgets often necessitate eating at quick-service restaurant chains that are notorious for serving foods that are high in saturated fat; however, with careful planning and item selection, it is possible to eat a complex-carbohydrate, low-fat meal in many quick-service restaurants.

- **Select baked, broiled, or grilled foods.** Fast-food restaurants often offer baked, broiled, or grilled items. Food prepared in this manner is preferable to fried and breaded items. For example, a broiled chicken sandwich with a baked potato is preferable to fried chicken and French fries.

- **Order toppings and dressings on the side.** Much of the fat and sodium from otherwise nutritious foods comes from the toppings or dressings placed on the food. Many quick-service restaurants have a condiment/dressings bar, so that patrons can order a plain hamburger or potato and then add desired condiments and dressings in moderation. Alternative dressings like lemon juice, rather than the high-fat mayonnaise-based dressings, should be encouraged.

- **Become familiar with the food.** Prior to competition, athletes should eat foods that are familiar to them. By selecting the same foods when away from home that they eat prior to high-intensity workouts at home, athletes should not experience any “surprise” food responses during the competitive event. They should wait until after the competitive event to try a new dish.

### Conclusion

There is no “breakfast of champions” or “magic food” that will guarantee success in athletic competition; however, poor nutritional planning and consumption of an inadequate diet could result in a substandard athletic performance. Eating on the road can pose nutritional challenges for the athlete, but with proper planning and disciplined eating, optimal nutrition can be obtained when competing away from home.

### References


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*Dale Wagner* is with the Health, PE, and Recreation Department at Utah State University in Logan.