Fueling the Runner: Breakfast, Lunch and Practice

Arranging your eating to wind up with energy left when you need it most

By Jackie Dikos, R.D.

As featured in the Web Only issue of Running Times Magazine

Wow has the summer flown by! It is already the time of year where school preparations begin. Getting to know your new teammates is always a wonderful way to enter a new school year. A sigh of relief can be heard since the grueling two-a-days of summer cross country practice have passed, and a feeling of anticipation mounts for the fall season ahead. Dinner table conversation may be changing from questions of being able to cover the distance to a potential top seven berth.

Learning the ropes of a new school routine can be tricky. You have to get down the bus or car-pool schedule, a new lunch hour, and of course get used to the rigorous practice routine following a full day of class. You may even be experiencing the different stresses involved in the pursuit of a running career as a collegiate athlete. With so many things to prepare for, it is easy for nutrition to take a back seat. How can the very thing that will fuel you through your crazy schedule be forgotten?

A major contributor to the highs and lows a high school runner experiences at practice is related to how he eats during the first half of the day. If the diet is lacking in either calories or nutrition it would make sense why a blank look is all a coach may get when trying to gain attention in the middle of a workout. The most common downfalls that affect high school athletes are: 1) Rushing out the door and missing a good breakfast, 2) Dislike of the school lunch thus eating very little or skipping the meal all together, and 3) High consumption of sugar beverages.

Let’s start with breakfast, one of the most important meals of the day after a long overnight fast. It’s understandable why a few more minutes of sleep sounds much better than breakfast at 6am. And no, a jelly donut as you walk out the door won’t quite fit the bill. A simple breakfast of whole grain toast or cereal, a glass of milk, and piece of fruit will provide the energy to start your morning off right. Breakfast will help tune the brain into what the teacher has to say and provide some of the essential energy needed in running a solid workout at practice.

Mom may be tempted to hand off a glass of juice when walking out the door. Even though it is a better alternative to no breakfast at all, juice is not the best option solely by itself. This is because juice alone is a quick burning fuel. We want to be sure to consume energy that will last throughout the morning. The best benefit comes from a meal consisting of carbohydrates, a protein source, and even a little fat. Think through your breakfast meal and make effort to ensure all these components are present.

It's a good thing you fueled yourself properly at breakfast because for some reason you are really feeling hungry for lunch. This is a very common feeling when you start your morning off right. You may in fact feel a greater sense of hunger having had breakfast versus the mornings you decide to skip breakfast completely. It's perfectly normal and a good indication you need to keep fueling.

Passing through the lunchroom, nothing seems to look very appealing. So you purchase a soft drink and enjoy some quality time with your friends. Unfortunately this is once again another fuel that burns far too quickly and is a source of empty calories. Stick with the same breakfast concept of carbohydrates, protein, and a little fat at lunch.

If a tougher practice is planned, choose foods that are easier to digest and loaded with carbohydrates. The “fat attack” or “super spicy” specials of the day may leave you more than uncomfortable at practice or a weekday race. A simple pasta meal or even mashed potatoes, chicken breast, and a couple dinner rolls would be a better option.

Is it wise to always have at least a few items packed in a small lunch cooler as a backup or to supplement the lunchroom meal. It can be anything from a peanut butter sandwich, bag of granola, and fruit to side items such as animal crackers, cheese sticks, and baby carrots to have with a purchased lunchroom sandwich. This will allow you to always have a plan “B” when nothing else seems suitable.

If for some reason there is an item or two left over in the lunch cooler, it will make for a great pre- or post workout snack later in the day. This should be a planned snack if you were designated with the early lunch hour slot.

Stay focused in the classroom and at practice by properly fueling. Mom and Dad can only do so much. As athletes we are expected to take pride and ownership of our nutrition and fueling regimen. Keying in to what you need to fuel your body will not only make you a stronger runner now, but it will teach you valuable life skills to remaining a healthy individual throughout life.

Jackie Dikos, RD was a stand-out high school runner growing up in Cincinnati, she went on to a successful running career as a Bearcat at the University of Cincinnati. Check out all of her nutrition articles for runners at http://runningtimes.com/fuel
Re-Fueling the Runner: Post Workout Nutrition

Satisfying the Specific Needs of the Competitive Runner

By Jackie Dikos, R.D.

There are so many good times to think back on from my high school and college running years. Among the many memories are all the laughing and joking with good friends after a hard practice. The residual burn of a tough workout always seemed to be eased by an off color remark made by the team clown. Having a good time always seemed so effortless. Nutrition was easy to overlook during the social hour shared with friends after a run.

Most days at practice, a run would always start as a group. As our fatigued bodies gradually trickled one by one back to school, we would guzzle water from the fountain and regroup back in the gym. There were a few last words from coach and teasing with teammates before the phone call for a ride home. Once home, that growling stomach would finally be sated with food almost an hour and a half after completion of the run.

In college, the pace did not vary quite as much between teammates so we would return to the fieldhouse in sets of 4 or 5 for a post-run stretch. Before long though we found ourselves in lengthy discussions over class demands, the latest gossip, or what to do over the weekend. Finally, after a walk to the cafeteria or drive home, a meal is served about an hour and a half after practice.

If recreational running was the goal this type of regimen would not be much of a problem. Someone who runs 3-4 times per week has more time for fluid and glycogen replacement. However the more competitive runner would benefit from keying into a refueling regimen.

First and foremost rehydration is priority. It is common for a runner to replace only a fraction of the fluids lost from a run. This is usually not related to a lack of resources. Poor fluid consumption is often by choice; it is a decision to simply stop drinking for whatever reason.

Ideally the aim should be to replace any fluid lost between each run. Having a flavored drink on hand may aid the rehydration process. A sodium containing beverage may also be beneficial for two reasons. It will help you to voluntarily drink more fluid and it will also help to retain more fluid therefore aiding the rehydration process. Rehydration is not limited to drinking water. Eating watery foods such as soup, watermelon, and citrus fruits will continue the process.

Having a general idea of how much fluid to replace can be useful. Weighing yourself before and after practice is a great way to assess fluid needs. A weight loss of 1-3% is considered normal. If weight loss exceeds this amount, drink more fluid during the workout to prevent potential performance impairment due to dehydration.

A workout can not only lead to dehydration, but it can drain muscle and liver glycogen stores. Resynthesis of muscle glycogen stores occurs at a faster rate over the 4 hours after a workout when carbohydrates are consumed shortly after the workout takes place. This plays particular importance for those who train more than once a day. This includes a training camp of two a days, sneaking in recovery miles, or even heavy weight lifting. Any time there is less than 8 hours between workouts or races a glycogen replacement regimen should be applied.

The goal is to consume a high carbohydrate meal or snack within 30 minutes of the workout or race. Eating a source of protein within this high carbohydrate snack will also help recovery. This may require being prepared with an after practice snack while you wait for a ride or teammates. Examples of great foods to choose for recovery include chocolate milk, fruit smoothie, sports bars, and trail mix -- but any source of carbohydrate is better than no carbohydrate at all.

If your glycogen stores are not particularly challenged, a standard meal routine that supplies adequate daily carbohydrates is sufficient to replenish glycogen stores. It is wise to make effort in structuring your meal to be eaten soon after a run to continue to optimize any potential recovery benefits. Good timing will support efforts to maintaining a desired caloric range for weight management while promoting refueling.

Time passes quickly after a run or workout when socializing or simply getting in daily responsibilities. Be sure to plan ahead and create the best refueling strategy for you, based on your nutritional needs, training demands, and racing goals. Efforts in refueling your body will help you be as prepared as possible in taking on the next workout, race, and rival.

Jackie Dikos is a mother, registered dietitian and 2:45 marathoner from Cincinnati, Ohio. She is currently living in Germany for 2 months.
**Fluids and Foods AFTER Training/Competition**

Post-exercise, nutrition provides:

- Energy and nutrients
- Physical comfort; absence of hunger
- Mental alertness

**Targets:**

- Optimal fluid and electrolyte levels
- Carbohydrate to restore muscle glycogen
- Protein to repair muscle damage
- Nutrients to support health and a strong immune system

**Why?**

- To replace lost fluid
- To ensure energy and nutrients to recover and prepare for the next event.

**For rapid glycogen replacement, consume fluid and carbohydrate-rich foods 15 minutes (or as soon as possible) after exercise.** Carbohydrate consumed immediately after exercise moves readily through the blood stream and into muscles to replace glycogen. Within 2 hours, absorption rates slow to normal.

**AFTER exercise:**

- Drink 1 1⁄2 L of fluid for every kg of body weight lost.
- Consume some salty fluids and food for electrolyte (sodium) replacement and better fluid retention.
- Eat a high carbohydrate meal/snack which includes rapidly absorbed (high glycemic index*) foods.
- Have some lean protein food.
- Avoid skipping meals. Be sure to eat your next regular meal (breakfast, lunch, or dinner).

* For information about the glycemic index of food, check out the Carbohydrate – Go Food section of Training Diet – Everyday Eating.

**The amount of food you consume immediately after exercise will vary according to the amount of time between your training or competition and your next scheduled meal or snack.**

**Late night RECOVERY nutrition:**

After an evening training session or competition, it is never too late to eat your recovery meal. Plan a carbohydrate-based meal such as cereal with milk and fruit or a lean meat sandwich with juice.

**CONVERSION:** 250 mL = 1 cup = 8 oz.

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**AFTER – Focus on Fluid and Carbohydrate, and Protein**

After exercise, eat a snack immediately, followed by a balanced meal within 2 hours. Choose from all four food groups:

<table>
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<td>Milk products</td>
<td>Meat and alternatives</td>
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**Meal ideas – from home or on the go:**

Plan foods to carry with you or food outlets where you can buy part or all of a meal.

- Fruit juice, bagel (with jam), yogurt
- Hot or cold cereal, milk, banana, juice
- Egg, ham on an English muffin, juice
- Lean meat sandwich or sub, carrot sticks, milk, oatmeal raisin cookie, fruit
- Minestrone soup, bagel, cheese, vegetable juice
- Chili on a baked potato or with a crusty roll, milk
- Pasta, vegetables and meat sauce, bread roll, juice, applesauce
- Bean burrito with vegetables, chocolate milk
- Thick crust pizza with lean meat, vegetable topping, milk, fruit

**Snack ideas:** Pack snack items to have on hand. Some snacks can be part of your next meal.

- Cereal/cereal bar, fruit, milk/yogurt
- Pretzels, tomato or fruit juice
- Bagel, peanut butter, jam, chocolate milk
- Yogurt, crackers or cookies, juice
- Pita and/or raw vegetables with hummus, milk
- Canned beans and pita, vegetable juice
- Fruit smoothie (fruit, milk, yogurt) and toast
- Sport or energy bar, fruit, chocolate milk

**Snacks for backpack or car:**

- Dry cereal
- Cereal, sport, or energy bars
- Juice boxes or fruit cups
- Crackers
- Tuna or beans in cans with pull-off tops
- Dried fruit
- Trail mix with cereal

Avoid bacterial contamination of meals and snacks. Keep cold foods cold and hot foods hot. Bacteria reproduce quickly at room temperature.

Try recovery fluid and food in training to find out what is comfortable for you. Never try new food or drinks if you will be competing again within the next 48 hours.
Fluids and Foods BEFORE Training/Competition

Pre-exercise nutrition provides:

- Energy
- Physical comfort
- Mental alertness

Targets:

- Optimal fluid intake
- High carbohydrate, moderate protein, and low fat

Why?

- To maximize fluid levels and prevent dehydration.
- To supply food that is quickly and easily digested.
- To ensure energy to train or compete.
- To prevent hunger before and during exercise.

Timing and meal/snack size are related.

Generally allow:

- 3-4 hours for a large meal to digest
- 2-3 hours for a smaller meal
- 1-2 hours for a small snack or blender/liquid meal or, whatever your own tolerance indicates

CAUTION: Spicy, gas producing, fatty, and/or fibre-rich foods may cause discomfort. Products containing caffeine may also be problematic.

BEFORE exercise:

- Drink 400-600 mL of fluid 2 to 3 hours prior. =1/2 - 1 1/2 cups
- Drink 150-350 mL fluid about 15 minutes before exercise, depending on your comfort and sport. =1/2 - 1 1/2 cups
- Eat a meal or snack, high in carbohydrate, 2 to 4 hours prior. Ideal carbohydrate foods include whole grains, vegetables, fruit, juices, milk, yogurt, soy drinks, and legumes. Legumes are fibre-rich and can be gas-producing.
- If you have a “nervous stomach” before events, choose lower-fibre grain products, juice, pureed foods, or a meal replacement beverage.

Experiment with fluids and foods in training to find out what, and how much, is comfortable for you.

Never try new foods or drinks before or during competition.

CONVERSION: 250 mL = 1 cup = 8 oz.

BEFORE – Focus on Fluid and Carbohydrate

Meal ideas – from home or on the go:

The amount and type of food will vary according to the amount of time available between the meal/snack and the start of training or competition. Allow time for digestion.

- Toast/bagel with jam, peanut butter, juice, yogurt
- Oatmeal/cereal, milk, raisins, juice
- Pancakes with a little syrup/spread, ham, juice
- Grilled chicken sandwich, juice
- Lean meat sandwich, carrots, milk, oatmeal raisin cookie, fruit
- Minestrone soup, cheese, crackers, vegetable juice
- Chili, bagel, milk
- Pasta with tomato/lean meat sauce, applesauce, chocolate milk
- Lentil soup, crusty roll, salad with a little dressing, soy beverage

Snack ideas:

- Fruit (fresh, canned, or juice)
- Fruit yogurt
- Low-fat muffin, juice, or applesauce
- Yogurt, social tea biscuits, juice
- Pita with hummus, vegetable juice
- Fig or oatmeal cookies, fruit, milk

Snacks for backpack or car:

- Dry cereal
- Cereal, sport, or energy bars
- Juice boxes or fruit cup
- Crackers
- Dried fruit
- Trail mix with cereal

From these guidelines, make a list of the drinks and foods that work for you.

- Plan ahead and be prepared.
- Carry pre-exercise food.

Avoid bacterial contamination of meals and snacks. Keep cold foods cold and hot foods hot. Bacteria reproduce quickly at room temperature.

Before exercise, choose foods which are higher in carbohydrate and lower in protein and fat. This will allow quick absorption of carbohydrate energy from the food into the body. Include protein and fat sources during meals and snacks at other times during the day.

SNAC
Sport Nutrition Advisory Committee
Comité consultatif sur la nutrition sportive

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THE PRE-COMPETITION MEAL

When it comes to pre-competition eating, each person has individual food preferences or aversions. Hence, no one single food or “magic meal” will ensure top performance. Whereas some athletes (runners or those in sports involving running and jumping) may prefer to eat nothing before competition, others (cyclists, skiers) may perform better after having eaten a light snack (50-200 calories) or small meal (300-500 calories). The following guidelines offer points to consider regarding your own personal pre-exercise eating program. Because each person is unique, you should experiment to learn which foods (if any), and how much of them, work best for your body.

• The goal of the pre-competition meal is to enhance stamina and endurance without causing any stomach discomfort. The pre-competition meal or snack helps to:
  1. maintain a normal blood sugar and prevent performance problems associated with hypoglycemia, such as light-headedness, blurred vision, needless fatigue and indecisiveness.
  2. settle the stomach, absorb some of the gastric juices and prevent you from feeling hungry.
  3. provide energy to fuel your muscles.

Although eating too much food can have adverse effects (nausea, stomach cramps), so can eating too little (lack of energy). If you get very nervous, stressed or have a sensitive stomach, you may prefer to abstain completely from food. You should make a special effort to eat extra food the day before to be well fueled for the competition.

• Choose carbohydrates before an event because they digest quickly and are readily available for fuel. Some popular choices include cereal, bananas, bread, bagel, crackers and pasta. Protein-rich foods (eggs, tuna, steak) take longer to digest and may increase the need to urinate. Fats (fried foods, peanut butter, greasy burgers) stay longest in the stomach and may feel heavy and uncomfortable.

• Pay attention to meal timing. In general, you should allow 3-5 hours for a large meal to digest; 2-3 hours for a smaller meal, 1-2 hours for a blenderized meal (liquids are absorbed more rapidly than solid foods). 5-1 hour for a small snack. Always eat extra carbohydrates the day prior and do little or no exercise so your muscles can refuel. Before morning events, eat a hearty, high carbohydrate dinner and bed-time snack the prior night. That morning, eat a light meal (such as 1-2 slices of toast and/or cereal) as tolerated to stabilize your blood sugar, absorb some of the gastric juices and keep you from feeling hungry. Before afternoon events, eat a hearty breakfast and a light carbohydrate-based lunch. Before evening events, eat a hearty breakfast and lunch, then a light snack as tolerated 1-2 hours prior.

Some athletes break all the rules and enjoy a big meal within an hour of the event. Others can eat nothing for four hours prior. You simply have to experiment during training to determine what foods (if any) settle comfortably, when you should eat them (one, two or three hours prior?) and how much you can eat.

• Always eat familiar foods prior to competition -- don't try anything new! Experiment with new foods during training to determine if they settle well, cause “acid stomach”, gas, heartburn, cramps or intestinal discomfort.

• Eat a high carbohydrate diet every day to prevent chronic glycogen depletion and ensure adequate glycogen replacement. One pre-event meal inadequately compensates for a poor training diet.

• When traveling, you might want to bring your favorite sports foods such as a tried-and-true cereal, muffin, fruit or sandwich. This way, you can worry less about fueling yourself and be free to focus on performing.

Sample high carbohydrate, low fat pre-competition food suggestions:

Breakfasts: cereal, lowfat milk, banana; toast, juice; muffin or bagel, yogurt; french toast or pancakes, syrup.
Lunches: sandwich with thick bread, little mayo; soup, crackers; thick-crust pizza (single cheese, no meat).
Snacks: crackers, bagel, toast, canned or fresh fruit, yogurt, small turkey sandwich, leftover pasta.
Dinners: spaghetti, tomato sauce: extra rice, noodles, potato, vegetables with small serving of chicken, fish.
Eating before competition helps your body in many ways. It will prevent low blood sugar (which can cause dizziness, fatigue, blurred vision and indecisiveness), help settle your stomach and stave off hunger. Food eaten 24 to 48 hours in advance and stored as glycogen will fuel your muscles. Food eaten within an hour of competition will give you extra energy for longer events.

There are general recommendations for the kinds of food and beverages that work well for many athletes before and after competition, however, what works best for you may vary slightly. Some athletes can only tolerate liquids before events; others swear by particular foods like cereal and a banana. You’ll discover what works for you by trial and error during training.

**Pre-Competition Meal Guidelines**
- high carbohydrate
- low fat
- small amounts—just enough to keep yourself from being hungry during the meet
- include fluids (see Fluids: Solutions for Competition handout)
- low salt (to help avoid dehydration)
- last meal eaten 3 to 4 hours prior to competition

The rule of thumb is: closer to the event eat a smaller quantity of food in a more liquid form. Here are some particulars:

**One hour or less before competition:**
- fruit and vegetable juices such as orange, tomato, or V-8 juices and/or
- fresh fruit such as apples, watermelon, peaches, grapes or oranges
- breads, bagels or muffins, and
- a light spread of peanut butter or slice of cheese for breads, or a light spread of cream cheese or butter for bagels and/or
- bowl of cereal with lower fat milk

**Two to three hours before competition:**
- fruit juices and fresh fruit, and/or
- breads, bagels or muffins, with a limited amount of butter or cream cheese

**Three to four hours before competition:**
- fruit juices and fresh fruit, and

**Rule of thumb:**
- 4 hours before race = 2 g of carbohydrate per pound of body weight
- 3 hours before race = 1.5 g of carbohydrate per pound of body weight
- 2 hours before race = 1 g of carbohydrate per pound of body weight
- 1 hour before race = 0.5 g of carbohydrate per pound of body weight

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**NOTE:**  SPORTS DRINKS WITHIN 1 HOUR OF RACE/PRACTICE MAY CAUSE BLOOD SUGAR SWING IN SOME PEOPLE (FATIGUE)
SPORTS DRINKS MAY CAUSE STOMACH CRAMPING
“ENERGY DRINKS” SUCH AS RED BULL, ETC, CAUSE DEHYDRATION, NERVOUS SYSTEM FATIGUE
GELS, GU, ETC., - MAY CAUSE BLOOD SUGAR SWING AND FATIGUE IF TAKEN BEFORE EXERCISE
Fluids Are Important For All Athletes! Why?

- To replace water lost during exercise.
- To avoid decreases in performance due to dehydration.
- To help maintain core body temperature within acceptable limits.
- To deliver carbohydrate during prolonged exercise (e.g., sport drink).
- To provide electrolytes (sodium and potassium) lost through sweat (e.g., sport drink).

**Monitor Your Fluid Losses:**

- Ample, light coloured urine means well hydrated
- Dark, scant urine signals a need for more fluid
- Weigh yourself before and immediately after exercise – see “Fluids after exercise” below.

**Fluids before exercise:**

Drink plenty of fluid daily to maintain weight and adequate urine output.

- Drink 400 – 600 mL of fluid 2 to 3 hours before exercise.
- Drink 150 – 350 mL about 15 minutes before exercise.

**Try this in training to find how much fluid is comfortable.**

**Limit beverages that contain caffeine and alcohol.**

**Fluids during exercise:**

Drink enough fluid to maintain fluid balance.

- Drink 150 – 350 mL every 15 to 20 minutes.
- Test how much you can tolerate without discomfort.

Athletes rarely consume enough to maximize the absorption rate of the digestive system.

**Fluids after exercise:**

- Replace fluid loss by 150% (about 1.5 L per kg weight loss). For example, if 2 kg weight loss, drink 1.5 L x 2 (3 L or 3,000 mL) fluid.
- Include sodium with or in fluids consumed after exercise. Sodium helps maintain plasma electrolyte balance and the desire to drink.

**Facts About Fluids and Exercise:**

- Adequate fluid intake is necessary for exercise and recovery.
- Fluids help maintain body temperature and prevent dehydration.
- Fluids are essential for optimal performance during exercise.
- Fluids help prevent heat-related illnesses and improve recovery.
- Fluids are important for proper nutrition and overall health.

Important – Away From Home

Although tap water may be “safe” to drink, variations in the bacteria may cause gastro-intestinal upset. Adding ice to drinks is the same as adding tap water.

- 250 mL = 1 cup = 8 fluid ounces
- 1 L = 4 cups = 32 fluid ounces
- 1 kg = 2.2 lbs.

**Acclimatize:**

If you expect to compete in a very hot environment, acclimatize yourself prior to competition by:

- Training in a similar environment prior to departure
- Travelling to the competition site at least a week prior to competition and gradually increasing your training in those conditions.

If you are not acclimatized and you are exercising in hot, humid conditions, make sure your fluid replacement drink contains sodium, lightly salt the pre-competition meal or choose foods containing salt (tomato or vegetable juice, salted crackers, low fat cheese).

**Factors That Encourage Fluid Consumption:**

- Easy access to the beverage
- Chilled drinks (about 10 degrees C)
- Flavoured fluids
- Sodium added (0.5 – 0.7 g/L to enhance flavour).

**Carbohydrate – Energy for Endurance:**

If exercising more than 1 hour, consume carbohydrate with your fluids.

- Commercial sport drinks containing 4% to 8% carbohydrate (40 – 80 g/L) are a suitable choice.

**Test sport drinks in training, not in competition.**

You can make a fluid replacement drink by mixing:

- 500 mL unsweetened orange juice
- 500 mL water
- 1.25 – 1.75 mL salt

One litre = 54 g (5.4%) carbohydrate and 0.5 – 0.7 g sodium.

**Avoid salt pills:**

Salt pills are too concentrated, need a lot of water for adequate dilution, and can lead to vomiting and diarrhea.

**Recovery after exercise:**

- Drink 1.5 L of fluid for every kilogram of weight lost during exercise.
- Consume high carbohydrate foods and drinks.
- Consume foods containing sodium (tomato or vegetable juice, pretzels, commercial soup, low fat cheese, salted nuts) and foods containing potassium (vegetables, fruit, milk, legumes, or meat) to replace electrolytes.

**Drink Beyond Thirst – exercise dulls the thirst mechanism.**
CHECKLIST FOR THE TRAVELLING ATHLETE AND COACH

Who is the “Team Nutrition Manager”? (parent, manager, coach, volunteer)

Research and list suitable restaurants near the practice or competition site.
1. _________________________ 2. _____________________________
3. _________________________ 4. _____________________________

Is there a grocery store near the athletic event to stock up on food supplies?

Is the portable “Team Nutrition Kit” stocked with the essentials?

☐ Thermos ☐ Bowls  ☐ Can opener  ☐ Napkins/paper towels  ☐ Water bottles
☐ Kettle/coffee urn  ☐ Cutlery  ☐ Sharp knife  ☐ Plastic bags  ☐ Large water cooler/dispenser

In addition, try these high energy, low fat ideas

**High Carbohydrate Foods**

☐ Whole grain buns  ☐ Raisin bread  ☐ Home made muffins  ☐ Rice cakes
☐ Instant hot cereals  ☐ Popcorn/pretzels  ☐ Cereal packs  ☐ Pasta salads*

**Bread Spreads that Travel**

☐ Canned tuna/salmon (water packed) and lemon juice*  ☐ Jam/jelly
☐ Low fat cheese*  ☐ Peanut butter

**Beverages**

☐ Lower-fat milk*  ☐ Juice packs  ☐ Instant breakfast
☐ Hot chocolate  ☐ Blenderized beverages*

**Sensible Snacks**

☐ Lower-fat yogurt*  ☐ Milk pudding  ☐ Fresh and canned fruit
☐ Hard boiled eggs*  ☐ Nuts and seeds
☐ Vegetable sticks  ☐ Sandwiches*
☐ Dried fruit (raisins, apricots)  ☐ Energy bars
☐ Plain cookies/biscuit (arrow-root, digestive, graham wafers, fig Newton’s, etc.)

* Items to be kept in cooler

SAMPLE MEALS ON THE ROAD

<table>
<thead>
<tr>
<th>TARGETS:</th>
<th>250 mL = 1 cup = 8 fluid ounces</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH CARBOHYDRATE (CHO) – 60-70%</td>
<td>FAT – 15-25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECOMMENDED</th>
<th>NOT RECOMMENDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 English Muffins, poached egg</td>
<td>English Muffin, egg, cheese &amp; ham</td>
</tr>
<tr>
<td>Jam, 15 ml</td>
<td>Hash Browns</td>
</tr>
<tr>
<td>2% Milk, 250 ml</td>
<td>2% Milk, 250 ml</td>
</tr>
<tr>
<td>Apple Juice, 250 ml</td>
<td>Apple Juice, 250 ml</td>
</tr>
<tr>
<td>70% CHO</td>
<td>49% CHO</td>
</tr>
<tr>
<td>16% FAT</td>
<td>35% FAT</td>
</tr>
</tbody>
</table>

| Cheese & Vegetable Pizza (1/2 X 10" Pizza) | Double Cheese/Pepperoni Pizza (1/2 of 10" Pizza) |
| 2 Large Rolls, plain | 1 Large Roll & Butter |
| Tossed Salad, no dressing | Tossed Salad & 30 mL dressing |
| Fruit Juice, 250 ml | Coke, 250 ml |
| 69% CHO | 42% CHO |
| 13% FAT | 42% FAT |

| Regular Hamburger with lettuce and tomato | Deluxe Double Burger with French Fries |
| Strawberry Shake | Strawberry Shake |
| Orange Juice, 375 ml | Apple, Banana |
| 62% CHO | 43% CHO |
| 25% FAT | 43% FAT |

| Baked Potato, plain Chili, 250 ml | Fishburger with French Fries |
| Chocolate Shake | Homo Milk, 250 ml |
| Fresh Orange | Cherry Pie |
| 63% CHO | 38% CHO |
| 17% FAT | 51% FAT |

MORE TRAVELLING TIPS

- Pack a nutrition kit for the road – full of fresh and dried fruit, vegetable sticks, juice, plain cookies, yogurt, buns and bagels.
- Supplement fast food meals with fruits and vegetables.
- Plan ahead – if unfamiliar with the area of the competition, inquire about nearby restaurants.
- Order hamburgers but hold the cheese, bacon, and extra sauce; add tomato, lettuce, mustard, ketchup, and relish instead.
- Remove the skin from fried chicken.
- Avoid deep fried foods (including French fries and onion rings), cream sauces, and gravy.
- Replace butter or sauce calories with another slice of bread, second potato or soup and crackers.
- Choose pizza with fruit and vegetable toppings – pineapple, mushrooms, green pepper. Thick crust pizza adds even more carbohydrate.

* Assistance from the B.C. High Performance Sport Science Unit is gratefully acknowledged.

SNAC: Sport Nutrition Advisory Committee
Comité consultatif sur la nutrition sportive

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