



Sports Nutrition for Youth: Planning for Tournaments, Competition and Travel Module

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Introduction

The information contained in this module has been adapted from [Sports Nutrition for Youth: A Handbook for Coaches,
https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-sports-nutrition-for-youth.pdf](https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-sports-nutrition-for-youth.pdf). The information in the handbook is based on current research and best practice in sports nutrition at the time of publication. These modules aim to support coaches who work with recreational athletes, rather than elite athletes. Coaches should always consult a sports dietitian for young athletes who compete at an elite level or who need special nutrition advice.

These short learning modules highlight the key sport nutrition concepts that coaches can teach their athletes and parents. Coaches can deliver content from the modules in the dressing room, on the bench or during formal discussions. No technology is required. There are a total of six sport nutrition modules available and they include:

- What to Eat Before During and After Activity
- What to Drink Before During and After Activity
- Choosing Healthy Drinks
- Planning for Tournaments, Competitions and Travel
- Nutrition Supplements and Sports Performance
- Alcohol and Sports Performance

How to use this module:

Key teaching points: These spotlight the main nutrition messages from the module to share with athletes and parents.

Background information: This section provides greater detail and research about the topic of each module including explanations of the ‘what’ and ‘why’ behind the key messages.

Materials for athletes: These tools and resources include websites and handouts that can be passed along to your athletes and parents to provide extra ideas to support healthy eating for athletes.

Time to deliver the module: The module could be delivered in 5–15 minutes depending on how much time you have with your athletes and how much detail you want to go into with them. If you only have a few minutes, the key teaching points could be delivered in about 5 minutes and then you could provide your athletes and parents with the handouts for further information. If you were to go through the teaching points as well as the background information it could take about 10–15 minutes.

Planning for tournaments, competitions and travel

Note: For more detailed information on planning for tournaments, competitions, and travel, please refer to the following pages in *Sports Nutrition for Youth: A Handbook for Coaches* Resource:

- Planning for Tournaments, Competition and Travel: pages 45–48

What to eat and how to stay hydrated before, during and after activity

Information on what to eat and how to stay hydrated before, during and after activity including meal and snack ideas can be found in the following two modules:

- *What to Eat Before, During and After Activity*
- *What to Drink Before, During and After Activity*

Key teaching points

1. Make healthy food choices and drink enough fluids during competitions for good mental and physical performance.
2. The amount and type of food athletes consume will vary based on the amount of time they have between competition or training sessions.
3. Test new foods or drinks during practice or training. Athletes need to eat familiar foods during competition that they know will not cause stomach upset and cramps.
4. When menu planning, athletes and their parents should focus on the type and amount of food and drinks to ensure good nutrition and hydration during competitions.
5. Coaches, athletes and parents should look into which food and drinks are available at restaurants and event venues when on the road. When healthy choices are not available, it is important to bring healthy food and drinks.
6. It is important to consider food safety when packing foods and drinks to prevent food borne illnesses. Cold foods must be kept cold and hot foods kept hot.

Background information

Benefits of proper nutrition and hydration

Competitions may require athletes to compete and train in many events over a short period of time. Proper nutrition and hydration are vital to ensure athletes:

- Consume enough energy, fluid and nutrients to recover from one event or training session and prepare for the next
- Have enough fuel for mental focus and physical performance
- Prevent physical discomfort caused by hunger, upset stomach or dehydration

Menu planning and meal timing during competitions

The **amount and type of food athletes** consume will vary based on the amount of time they have between competition or training sessions. When the amount of time between events is **less than 24 hours**, athletes should consume food and fluid **within 30 minutes** of ending the first event.

To refuel quickly athletes should consume foods:

- high in carbohydrates
- moderate in protein
- low in fat
- low in fibre

Carbohydrates are the main source of energy for the brain and muscles. Protein repairs and builds muscles. Fat and fibre take a long time to digest and may cause stomach upset during the next event when athletes have **less than three hours** to digest their meal.

Meal and snack ideas meeting these criteria can be found in the handouts listed in the *Materials for Athletes* section at the end of this module. General guidelines to help athletes plan and time meals and snacks include:

- If the next event is **more than 3 hours away**, eat a regular meal including all 4 food groups in [Canada's Food Guide - http://hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php](http://hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php)
- If the next event is **less than 3 hours away**, eat a low fibre, low fat snack made up of at least 2 different food groups in [Canada's Food Guide - http://hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php](http://hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php)
- If the next event is **within one to two hours** or if athletes have a “nervous stomach”, it is best for athletes to consume a liquid snack such as a low fat smoothie without added sugar, sweetener or honey
- Drink 250 mL–500 mL (1–2 cups) of water between events to ensure proper hydration

Materials for athletes

These supporting handouts that you can share with your athletes and parents can be found on the following pages:

- Travel Checklist for Athletes
- Travel Checklist for Coaches
- What Should I Eat Before Activity
- What Should I Eat During Activity
- What Should I Eat After Activity
- How Much Should I Drink When I am Active?

Sports Nutrition Travel Checklist for Athletes

Regardless of the length of time you need to travel for competition, you need to eat and drink well so you arrive ready to perform at your best. You have the same nutrition needs during travel as you do when training or competing. Try out some of these ideas.

Pack a Healthy Nutrition Kit

Whole Grain Products

- Sliced bread
- Buns
- Pita shells
- Tortillas
- Bagels
- Crackers
- Cold cereal (requires a thermos of milk)
- Popcorn (little or no added salt and fat)
- Granola bars (high fibre options)
- Instant plain oatmeal (requires a thermos of hot water or hot milk)

Foods Higher in Protein

- Natural nut or seed butters*
- Flavoured canned tuna
- Salmon canned in water
- Tuna canned in water
- Boiled eggs*
- Hummus*
- Lower fat cheeses*
- Sliced ham*
- Sliced roast beef*
- Sliced chicken or turkey breast*
- Greek yogurt*

Vegetables and Fruit

- Fresh fruit
- Fresh vegetables (celery, carrots, snap peas, grape tomatoes)
- Fruit, canned in its own juice
- Unsweetened fruit sauces
- Mixes of dried fruit, roasted nuts or seeds

Supplies

- Personal water bottle
- Thermos
- Napkins
- Travel plates and bowls
- Travel cutlery and can opener
- Cooler (with ice)
- Small garbage bags
- Moistened wipes
- Snap-lock plastic bags
- Snap-lock food containers
- Hand sanitizer

Beverages

- Water
- 1% or skim milk*
- Unsweetened fortified soy beverage*
- Herbal teas

Condiments

- Mustard*
- Light mayonnaise*
- Relish*
- Ketchup*

* These foods must be kept cold in a cooler

Adapted from Alberta Health Services, Sports Nutrition for Youth: A Handbook for Coaches

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Sports Nutrition Travel Checklist for Coaches

No matter what length of time your athletes need to travel for competition, the goal is to make sure they arrive ready to perform at their best. Some athletes may see travel as a time to have fun so it is important to plan ahead to make sure they still think about healthy food choices. Try some of the following ideas to remind athletes they need to meet the exact same nutrition needs during travel as they do when training or competing at home.

Ask Athletes to Pack a Healthy Nutrition Kit

1. Whole grain products:

- Sliced bread
- Buns
- Pita shells
- Tortillas
- Bagels
- Crackers

2. Protein-rich foods to eat with grain products:

- Natural nut or seed butters*
- Flavoured canned tuna
- Salmon canned in water
- Tuna canned in water
- Hummus*
- Lower fat cheeses*
- Sliced ham*
- Sliced roast beef*
- Sliced chicken or turkey breast*

3. Snack items:

- Fresh fruit
- Fresh vegetables (celery, carrots, snap peas, grape tomatoes)
- Fruit canned in its own juice
- Unsweetened fruit sauces
- Mixes of dried fruit, roasted nuts or seeds
- Granola bars**
- Instant plain oatmeal (requires a thermos of hot water or hot milk)
- Cold cereal
- Boiled eggs*
- Greek yogurt*

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4. Beverages:

- Water
- 1% or skim milk*
- Unsweetened fortified soy beverage*
- Herbal teas

5. Condiments:

- Mustard*
- Light mayonnaise*
- Relish*

6. Supplies:

- Personal water bottle
- Thermos
- Napkins
- Travel plates and bowls (often sold at camping supply stores)
- Travel cutlery and can opener (often sold at camping supply stores)
- Cooler (with ice)
- Small garbage bags
- Moistened wipes
- Snap-lock plastic bags or food containers
- Hand sanitizer

* These foods must be kept cold in a cooler. The [Safe School Lunches](#) information can show athletes how to keep food at the right temperature.

**See the [Alberta Nutrition Guidelines for Children and Youth](#) for guidance on which granola bars to choose most often.

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What Should I Eat Before Activity?

It is important to eat enough food before activity to fuel your muscles and brain for good mental and physical performance while you are active. High carbohydrate foods digest quickly and should be the main source of fuel within 2–3 hours before activity.

Meals and snacks should have a lot of carbohydrate, but only a medium amount of protein (one food guide serving of Meat and Alternatives or Milk and Alternatives) to make sure your stomach empties before activity. Choose foods that are low in fat and lower in fibre, to prevent gas or stomach upset.

| Best to choose before activity: High carbohydrate but not too much protein, fibre or fat |
|---|
| Pasta in tomato sauce |
| Wrap or tortilla with lean meat (chicken breast, ham) |
| Poached eggs on dry toast |
| Cereal such as oatmeal |
| Bread, buns, pita, tortilla, English muffin |
| 1% or skim milk |
| 2% milk fat (M.F.) or less yogurt with fruit |
| 1% M.F. or less cottage cheese and fruit |
| Fruit smoothies made with milk rather than juice and with no added sugar or honey |
| Fresh fruit, carrots, potatoes, yam |

| Best to avoid before activity: Higher fat OR higher fibre |
|--|
| Hamburgers |
| High fat meats and cheeses |
| Deep-fried foods, French fries or potato chips |
| Bran muffins (higher fat and higher fibre) |
| Ice cream |
| Cream-based soups or sauces (such as Alfredo) |
| Chocolate |
| Peas, beans and lentils (too much fibre before activity, so choose these after activity) |
| Cabbage, broccoli or cauliflower (too high in fibre before activity, so choose these after activity) |

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Before a competition, always eat familiar foods that do not cause stomach upset or cramps when you are active. Do not try a new food before a competition!

When Should I Eat?

If you begin an activity with food in your stomach, you will likely have cramps or upset stomach. Eat your meal two to three hours before an activity to give your body time to digest the food and convert it to energy to fuel muscles.

If it is not possible to eat a meal two to three hours before an activity, you can still eat a snack one to two hours before you begin. This snack will help prevent hunger and provide energy for the activity.

Be sure to drink water with your meal or snack to help you stay well hydrated.

Sample Meals 2–3 Hours Before Activity

Include all four of the Canada's Food Guide food groups in your meal 2–3 hours before your activity:

- 2 slices toast with 30–45 mL (2–3 Tbsp) nut or seed butter, a piece of fruit and 250 mL (1 cup) skim or 1% milk.
- Chicken sandwich with 30 g (1 oz) lower fat cheese, mustard and 125 mL (½ cup) unsweetened applesauce.
- 60–90 g (2–3 oz) roast beef and 250 mL (1 cup) vegetables combined in a stir-fry and served over 250 mL (1 cup) brown rice with 250 mL (1 cup) skim or 1% milk to drink or 175 g (¾ cup) yogurt for dessert.
- 2–3 poached or scrambled eggs wrapped in a tortilla shell with fresh or grilled vegetables and 30 g shredded lower fat cheese with a bowl (250 mL) of fruit salad on the side.
- 60–90 g (2–3 oz) grilled fish (such as salmon) with at least 250 mL (1 cup) grilled or steamed vegetables and a large baked potato with salsa and 15 mL (1 Tbsp) sour cream.

Sample Snacks 1–2 Hours Before Activity

Include at least two food groups in your snack 1–2 hours before your activity:

- Small granola bar, 175 g (¾ cup) low fat yogurt and a banana.
- 60 mL (¼ cup) low fat cottage cheese, 250 mL (1 cup) pear slices and an English muffin.
- ½ roast beef sandwich with mustard instead of mayonnaise.
- 250 mL (1 cup) plain oatmeal made with skim or 1% milk and garnished with fresh apple slices and cinnamon.

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What Should I Eat During Activity?

Proper nutrition and hydration during activity will help improve your mental and physical performance while you train and compete.

If you are active for less than an hour, you do not need to eat during activity so long as you eat enough food before you start.

You may need to eat during activity to provide energy to your brain and muscles if:

- You are involved in an intense, nonstop endurance activity that lasts longer than one hour (such as running, cycling or cross country skiing).
- You have only eaten a small meal or snack before activity and you run out of energy.

If you are doing an intense activity for more than one hour, you can aim to eat 30–60 g of carbohydrate per hour. You also need to drink enough fluid to stay hydrated.

You can spread out this carbohydrate intake by snacking on food, sipping a sports drink or a combination of both.

During a competition, always eat familiar foods that do not give you an upset stomach or cramps while you are active. Do not try a new food during a competition! Test new foods during training instead.

Examples of food choices for carbohydrates include:

- 1 large banana (30 g carbohydrate)
- 1 medium orange (12 g carbohydrate)
- 250 mL (1 cup) watermelon (11 g carbohydrate)
- 8 dried apricots (26 g carbohydrate)
- 1 small box (28 g) raisins (22 g carbohydrate)

Should I Use Sports Food Products?

Food products such as sports gels, beans, chews and bars can help you replace blood sugar and electrolytes (sodium and potassium) during intense activity that lasts more than an hour. However, these products do not keep you hydrated when you sweat a lot so you need to drink water at the same time.

Sports food products are only helpful during activity. They are not healthy food choices before or after activity because they are low in fibre and high in sugar and calories. It is better to choose real foods at these times.

If you choose to consume sports food products during intense activity, be sure to:

- Use the Nutrition Facts table to work out the portion of the product you need to get 30–60 grams of carbohydrate per hour of intense activity.
- Choose items that have no caffeine or sugar substitutes or you may get an upset stomach.

Drink enough water (125 mL (½ cup) every 15 minutes) at the same time.

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What Should I Eat After Activity?

Proper nutrition and hydration are important after activity, training, or competition to refuel your muscles and repair tissue. To refuel your muscles, you need to eat carbohydrate and protein when you are hungry for your next meal or snack.

| Carbohydrate rich foods: | Protein rich foods: |
|---|---|
| Fresh, frozen, or canned fruit | Lean meat |
| 100% fruit juice or dried fruit | Fish |
| Bread, bun, pita, flat bread, or bagels | Poultry |
| Cereal | Tofu |
| Pasta | Beans and lentils |
| Rice | Nuts, seeds, or nut/seed butter |
| Couscous | Cheese (20% M.F. or less) |
| Quinoa | Cottage cheese (2% M.F. or less) |
| 1% or skim milk or unsweetened fortified soy beverage | 1% or skim milk or unsweetened fortified soy beverage |
| Yogurt 2% M.F. or less | Greek yogurt (2% M.F. or less) |

Meal and snack ideas include:

- 1 medium banana with 250 mL (1 cup) of skim or 1% milk
- 175 mL (¾ cup) bowl of granola with 250 mL (1 cup) of skim or 1% milk
- 175 mL (¾ cup low fat yogurt) with 125 mL (½ cup) of fresh berries
- 1 slice wholegrain toast with 15 mL (1 Tbsp) peanut butter and 1 small apple

How Soon Should I Eat After Activity?

The timing of your snack or meal after activity depends on how soon you will be active again.

If you have less than 24 hours until your next activity:

Eat foods that provide both carbohydrate and protein within 30 minutes of your activity. It is important to eat within this time to make sure your muscles fill up their energy stores.

If you have more than 24 hours until your next activity:

Eat foods that provide carbohydrate and protein when you are hungry for your next regular meal or snack. There is no need to eat within 30 minutes of activity if you are not hungry.

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