

# *Fuel up* **FOR FUN!**

## **NUTRITION BASICS**

for coaches and parents of  
sporty kids ages 6 to 15 years





### **Physical activity and healthy eating go hand in hand.**

Parents and coaches have an important role to play in enhancing the health and well-being of kids through sport, physical activity, and eating right.

Discover how you can support kids by fueling up with the right foods and beverages to meet their needs for healthy growth and physical activity.

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# GET A MOVE ON!

According to the *Canadian 24-Hour Movement Guidelines for Children and Youth*, children and youth should achieve high levels of physical activity, low levels of sedentary behaviour, and sufficient sleep each day for health benefits.



Source: Canadian Society for Exercise Physiology

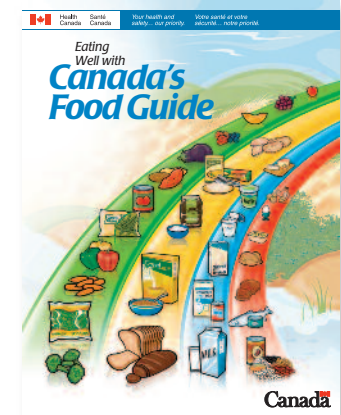
## A healthy 24 hours includes:

- SWEAT** - Moderate to vigorous activity for 60 minutes a day minimum.
- STEP** - Light physical activity for several hours a day.
- SLEEP** - 5 to 13 year olds need 9 to 11 hours per night.  
- 14 to 17 year olds need 8 to 10 hours per night.
- SIT** - No more than 2 hours of screen time.  
- Limit extended periods of sitting.

**Friendly Reminder:** Participating in quality sport is an excellent way to help kids meet their daily physical activity requirements, BUT, keep in mind, that means actively participating in every practice and game, not sitting on the bench.

## Follow the Guide

Active kids can meet their nutrition needs by following *Canada's Food Guide*



## Back to Basics:

Healthy eating even for physically active kids does not need to be complicated. On most days, aim to:

- Eat 3 meals a day plus healthy snacks.
- Serve meals with foods from 3 to 4 food groups.
- Offer snacks with foods from 2 or more food groups.
- Quench thirst with water.



Active kids may need extra Food Guide servings of healthy food to meet their energy and nutrient needs. For example, a child might have a bigger snack after school and/or double-up some portions at dinner.

## 4 food groups: FUEL

### No one Food Group (or food) has it all.

Each Food Group provides a different set of key nutrients. Following the eating pattern in *Canada's Food Guide* helps kids to get enough vitamins, minerals and other nutrients to achieve overall health and vitality.

Here are some examples of wholesome foods from the 4 Food Groups:

- **Vegetables and Fruit:** sweet potato, kale, bell peppers, apples, bananas, peaches
- **Grain Products:** barley, rice, quinoa, oatmeal, whole grain bread/cereal/pasta
- **Milk and Alternatives:** milk, cheese, yogurt, cottage cheese, fortified soy beverage
- **Meat and Alternatives:** beef, fish and seafood, pork, poultry, beans, lentils, nuts/seeds, nut butters, tofu, eggs

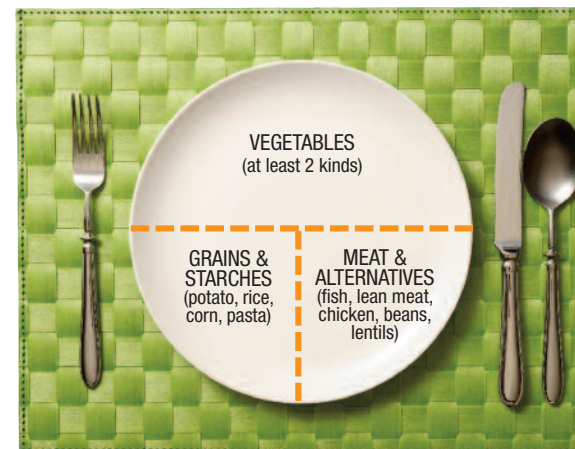


For optimum nutrition, offer kids food that is in its most natural state or minimally processed. For example, instead of chicken nuggets, offer oven-roasted chicken.



## It's all about balance

If tracking food guide servings seems complicated, follow this **healthy plate** approach as a guide to proper proportions.



Adapted from the Canadian Diabetes Association, 2008.

**Reality check:** Canadian children ages 9 to 13 years are getting a whopping 57% of their calories from ultra-processed foods such as: doughnuts, pop, salty snacks, candy bars, ice cream, French fries and frozen pizza.\*

The result? Children may get too much sodium and added sugar, and fall short of key nutrients such as protein, calcium, iron, and vitamins.



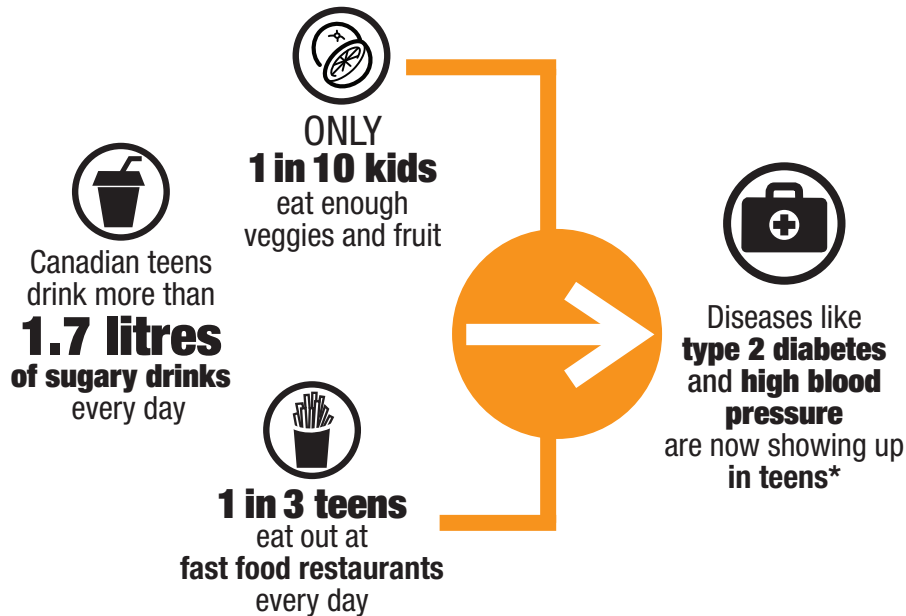
Make sure kids get enough iron from foods such as meats, legumes, leafy greens and fortified grain products. Not enough iron can leave a child feeling tired and irritable, making it harder for them to keep up with a rigorous training schedule. Iron from meats are the most readily absorbed.

\*Ultra-processed foods in Canada: consumption, impact on diet quality and policy implications, December 2017, Heart and Stroke Foundation of Canada



*...it matters:*

# Unhealthy eating can lead to health problems



## Diet is the #1 risk factor for chronic diseases\*

Take stock of your family's food habits as well as foods. Aim to replace highly processed food with foods closest to their natural state – “real foods.” This one healthy habit is one of the best ways to improve the health of kids (and the whole family).

\*Reference: Let's stop marketing unhealthy food and beverages to kids.(Infographic) Health Canada. Accessed October, 2017.



## Treats? Follow the 80:20 Rule

Treats are still ok – after all, where would the world be without chocolate?

A good way to include treat foods in a healthy lifestyle is to limit how often we have them and how much we have.



**Follow the 80/20 rule:** To support healthy growth and fuel physical activity, kids should eat healthy choices roughly 80% of the time and eat less healthy choices 20% of the time.

**NOTE:** Don't make treats taboo or associate guilt or shame with eating them. Instead, teach kids about balance and keep things positive by focussing on healthy choices – make healthy food options the 'go-to' easy and appealing choices.



Kids will eat more fruit such as apples and pears when they are cut up into wedges. That simple step turns these fruits into go-to snacks.

## Timing is everything...

Eating the right food at the right time means kids feel energized during physical activity without discomfort from hunger, tiredness, or stomach upset.

It can take time to figure out what works best for each child but there are some basic guidelines to optimize performance.

### 2 to 3 hours BEFORE physical activity

#### **OFFER A MEAL**

**Higher carbohydrate + Moderate protein + Lower fat/fibre**

Try to avoid higher fat and fibre foods as they slow digestion which can lead to an upset stomach. Suggestions:

- Steak and pepper kebabs with quinoa
- Fish taco, coleslaw, orange slices, fortified soy beverage or milk



### 1 to 2 hours BEFORE physical activity

#### **OFFER A SNACK**

**Carbohydrate + Protein**

A balanced snack should include carbohydrates and protein. Suggestions:

- Small bowl of leftovers from dinner
- Fruit and yogurt smoothie
- Half a peanut butter sandwich

### DURING physical activity

There are some occasions when eating during physical activity is needed:

- For intense continuous endurance activities lasting longer than 1 hour, such as running, cycling, or skiing, kids will need some carbohydrates to perform well, feel good, and keep up their energy.
- Some sports such as, baseball may last a while but they are not continuous activities, so these same guidelines would not apply unless kids are at a tournament and have multiple events in the day.



Offer easy to digest options and think lower fat and fibre to avoid stomach upset. Try mini muffins, pretzels, cereal bars, fruit slices or diluted fruit juice, or rice/wheat crackers thinly spread with a nut butter.

### 30 to 40 minutes AFTER physical activity

After physical activity, the body is ready to refuel with carbohydrates, repair muscle with protein, and rehydrate with fluids like water, milk and juicy fruits (e.g. melon, oranges). Eating within 30 minutes of exercising is especially important if the child will be exercising the next day. Otherwise they can eat when they are hungry at their next regular meal or snack.

## Challenges

### 1 - CHALLENGE: Early morning practice

**Eat in the car on the way to practice rather than having a sit-down breakfast.**

- Drink a smoothie or eat dry cereal with yogurt and banana or grapes.
- Pack something more substantial to eat later in the morning like a sandwich, hard-cooked egg or roast beef wrap and piece of fruit.

### 2 - CHALLENGE: Practice at dinnertime

**Eat half of dinner before practice and the remaining half afterwards OR eat a snack before practice and smaller dinner afterwards.**

### 3 - CHALLENGE: Nervous stomach

**Encourage nibbling and sipping with some casual conversation or other quiet distraction.**

- Pack dried cereals mixed with nuts and raisins or dried cranberries.
- Provide apple slices and orange segments.
- Offer baby Gouda or cheese cubes with melba toast.
- Make a smoothie for sipping.

### 4 - CHALLENGE: Not enough veggies

**Include veggies in your own meals and snacks so you lead the way with healthy habits for the kids to follow.**

- Think snackable veggies like handfuls of snap peas, broccoli florets, grape tomatoes, sweet pepper strips or try spiralized carrots. Offer with ranch dressing, hummus or herbed-yogurt for dipping.
- Include grated carrot, baby spinach or shredded coleslaw to mix in wraps, sandwiches, casseroles, soups, omelets or blended into smoothies.
- Make salads ahead so they are ready to grab-and-go. Divide into individual portions in sealed take-away containers. Pack the dressing separately.

### 5 - CHALLENGE: Tournament days

**Pack foods from home AS MUCH AS POSSIBLE.**

- Ask for a mini-fridge with your hotel room in advance and stock it with healthy foods or take a plug-in cooler.
- Pick up fresh fruit and veggie trays at local grocery stores.
- Choose smaller meals and snacks when time is tight between events.
- Eat and drink within 30 minutes after a game to speed up recovery.

**Concerned about the child's nutritional well-being? Consult with a registered dietitian for personalized advice. Visit [dietitians.ca](http://dietitians.ca).**



Invite kids to help plan, shop and cook. They'll be more likely to eat the healthy food served and will learn valuable food skills along the way, too.

## Power up with PROTEIN!

**Protein is important as it helps to build muscle and supports muscle recovery after exercise. Some kids don't get enough.** The latest Canadian stats report that 57% of teen boys are falling short of the Food Guide recommended 3 servings of meat and alternatives per day. Include protein-rich foods throughout the day, at each meal and snack.



Protein supplements are not needed. They are costly and can't match the nutritional benefits from whole foods. Protein bars are often high in sugar or sugar alcohols and/or fibre which can cause stomach upset.

### Know your protein sources

While we can get protein from a variety of foods, it's good to know which ones have the most.

#### RANKING PROTEIN SOURCES

##### *a bit...*

Quinoa  
Bread  
Pasta  
Rice

##### *a bit more...*

Tofu  
Beans  
Hummus  
Eggs  
Nuts/seeds

Lentils  
Cheese/yogurt  
Milk  
Yogurt  
Soy beverage

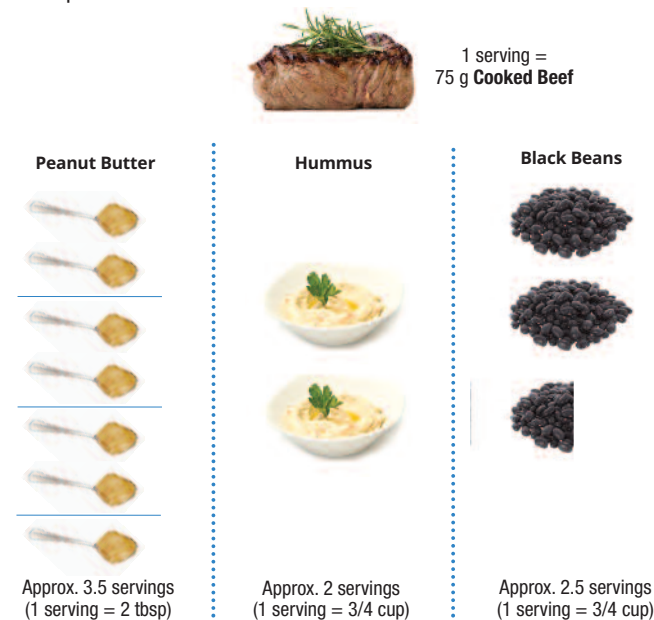
##### *the most...*

**Beef**  
**Pork**  
**Turkey**  
**Chicken**  
**Fish**

Source: Eat Right Ontario (Sept., 2017)

## Consider Protein Density

In general, meat, fish and poultry are the most protein dense and have the most protein for the least amount of food. Even a small amount of meat offers an incredibly rich source of protein. To demonstrate protein density, here's what 26 grams of protein looks like:



Source of nutrient values: Health Canada, Canadian Nutrient File, 2015, food codes: Beef 6172, Peanut Butter 6289, Hummus 4870, Black Beans 3377.

Nutrient density is a term to describe the total nutrient-benefit package a food can provide. Nutrient density is especially important to consider for younger children. With their smaller tummies, you want to make sure they fill up with foods that count rather than empty calorie foods.



Because each food has a unique set of beneficial nutrients, for the best nutrition, offer kids a variety of protein-rich foods from the meat and alternatives food group.





## MYTH or FACT?

**FACT:** It's important to drink before, during and after sports.

Without enough fluids, kids may become dehydrated, leading to muscle cramps, feeling tired or not performing their best in competition.

**Before physical activity**

- Aim to have 1 to 2 cups of water up to 4 hours before physical activity (amount depends on age/size of child).
- If 2 hours before an event, urine is dark, or there is very little or no urine, drink more water. About  $\frac{1}{2}$  to  $1\frac{1}{2}$  cups, depending on the age/size of the child.

**During physical activity**

- Tell kids to sip water every 5 to 10 minutes. Kids will need more water when it's hot and humid.

**After physical activity**

- Fluid loss continues after physical activity so kids need to drink after practices and games.

**MYTH:** Water and juice are equally good choices for hydration.

**Water** is the best choice before, during and after competition, a practice or game. Kids will drink more when water is flavoured. Try adding mint leaves or orange, watermelon or cucumber slices to water.

**Juice and pop** are high in sugar which makes it hard to absorb the water they contain. That's why they are not recommended for hydration during physical activity. In fact, they increase the chances of dehydration and may cause stomach upset.

### Thirst is not a reliable sign of hydration.

A good sense of thirst is not well developed in kids. By the time kids feel thirsty, they are already becoming dehydrated. Dehydration can happen even when there are no symptoms.

Symptoms of dehydration are:

- dry lips/mouth
- flushed skin
- headache
- dizzy
- dark yellow, strong smelling urine

### Children and youth should avoid energy drinks.

Energy drinks are **NOT** good for kids and are **NOT** the same as sports drinks. Energy drinks have caffeine, which is not recommended for kids, and they are often loaded with sugar making it harder to absorb fluids. Drinking energy drinks during physical activity can lead to dehydration and stomach upset.

### What about sports drinks?

Although water is the best choice for hydration, a child might need a sports drink (electrolyte beverage) when they are:

- sweating a lot, for more than 45 minutes
- during non-stop, intense physical exertion lasting longer than 60 minutes: basketball, soccer, dance, tennis, swimming, cycling, tournament days
- in very hot or humid conditions

### HOMEMADE SPORTS DRINK

2 cups 100% juice  
2 cups water  
¼ tsp salt

Source: [www.coach.ca](http://www.coach.ca)



## Make healthy foods available

Knowing what to eat is of no use if we can't put it into practice. Everywhere kids live, learn and play, healthy food choices need to be easy to access. It comes down to building a healthy food environment for kids at home, at practice and out at competition. Easier said than done, that's for sure. Here are some practical tips to help make quality meals and snacks more available.

### Tips to Improve Healthy Food Access

1. Make and take meals from home as much as possible.
2. Make veggies and fruit as easily accessible as possible - wash them, cut them and make sure they are out in front of kids.
3. Invest in a food cooler to help keep foods safe and portable.
4. Before tournaments, check to see what grocery stores and food options are close to your team lodging and competition facilities. Does your team lodging have a hospitality room for some simple food prep, reheating and a dinner buffet? Does your team lodging offer access to refrigeration?
5. Share the meal prep workload: make shopping, cooking and cleanup team work.

## Cook up the possibilities

Cooking at home pays off now and into the future with lifelong good eating habits and the food skills that enable nourishing meals.

Research shows limited time is the biggest barrier to healthy eating, so how do we ensure kids have healthy meals and snacks on hand when we're so busy? Work smarter not harder! Here are some strategies:

1. **Cook once, eat twice:** Sunday's leftover pot roast becomes pulled beef for Monday's taco dinner.
2. **Dust off the slow cooker:** Come home to a cooked meal.
3. **Buy convenient veggie options:** Try salad kits and pre-cut veggies.
4. **Make breakfast for dinner:** Try cheesy scrambled egg burritos.
5. **Meal prep Sunday:** Chop veggies and cook ground meats, steak, chicken or pork ahead of time so that it's a snap to enrich a pasta sauce, soups, tacos and more throughout the week.



Use a slow cooker to make a pot luck chili for the team parties or to enjoy in the hotel hospitality room after games when away from home.



## *Satisfying Meals on the Sidelines:*

If you don't pack good meals from home, your food choices during competitions are limited to the food environment around you such as fast-food takeaways, chip trucks or vending machines. Ugh. Try these sideline meal-ideas for portable protein lunches that help kids power-up for competition. Protein helps kids feel full longer.

### **RUSTIC ITALIAN BEEF & TOMATO SOUP:**

Heat 2 tbsp **oil** over medium-high heat in large saucepan; cook, 1 **onion** (diced), 2 **carrots** (thinly sliced), 4 **cloves garlic** (minced), ½ tsp **dried rosemary** (crumbled), ¼ tsp each **salt** and **pepper**, stirring occasionally, until softened, about 8 minutes. Add 3 cups **tomato juice**, 1 cup **beef broth** and 1 cup **water**; bring to boil. Reduce heat and simmer for 10 minutes. Add 2 cups thinly sliced cooked **roast beef** or **steak**, **pork** or **chicken** and 3 cups large cubes **day-old baguette**; stir until bread has 'melted' into soup and soup thickens, about 8 minutes. Stir in ¼ cup **Parmesan cheese** and ¼ cup chopped fresh **basil** or **parsley**.

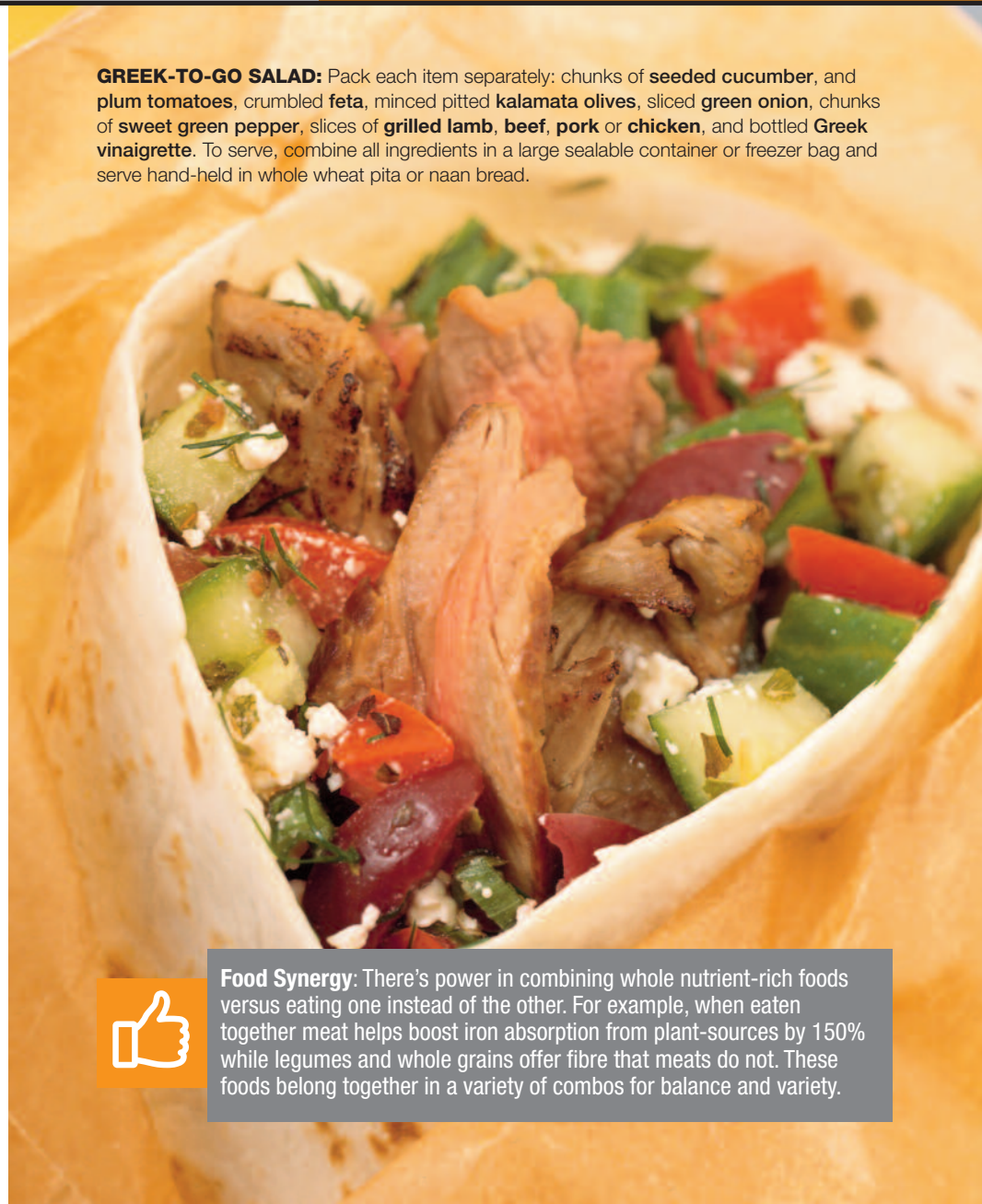


**SALAD-ON-THE-GO:** In large sealable container, combine **cooked Scoobi Doo** or **rigatoni pasta** with chunks of **grilled vegetables** (e.g. sweet peppers, zucchini or asparagus), blanched **snow peas** and **green beans** and a splash of **oil**. Pack separately: halved **grape tomatoes**, crumbled **feta**, sliced **green onion** and **Mason Jar Vinaigrette** (below). Just before serving, combine veggies and pasta with just as much dressing as desired; season with **salt** and **pepper** to taste. Serve in cups with skewers of **grilled chicken**, **beef** or **pork**.



**MASON JAR VINAIGRETTE DRESSING:** In a jar with lid, combine 1/2 cup **canola** or **olive oil**, 3 tbsp **red wine vinegar**, 1 tbsp EACH **lemon juice** and **maple syrup** or **liquid honey**, 1 tsp EACH **Worcestershire sauce** and **Dijon mustard**, minced **clove garlic** or **green onion**, **salt** and **pepper** and a generous pinch of dried rubbed **oregano leaves**. Cover and shake to combine.

**GREEK-TO-GO SALAD:** Pack each item separately: chunks of **seeded cucumber**, and **plum tomatoes**, crumbled **feta**, minced pitted **kalamata olives**, sliced **green onion**, chunks of **sweet green pepper**, slices of **grilled lamb**, **beef**, **pork** or **chicken**, and bottled **Greek vinaigrette**. To serve, combine all ingredients in a large sealable container or freezer bag and serve hand-held in whole wheat pita or naan bread.



**Food Synergy:** There's power in combining whole nutrient-rich foods versus eating one instead of the other. For example, when eaten together meat helps boost iron absorption from plant-sources by 150% while legumes and whole grains offer fibre that meats do not. These foods belong together in a variety of combos for balance and variety.



## Group Meals:

Whether it's the year-end celebration, team-building day or end of tournament, there's always a team potluck! Here are some super simple ideas for mains that won't keep you chained to the barbecue or oven at the party.

**TEX-MEX TACOS:** In Dutch oven, cook 1 lb (500 g) **ground beef**, 1 tbsp **chili powder**, ½ tsp EACH: **ground cumin**, **salt**, **paprika** and **ground coriander**, and 1/8 tsp **cayenne pepper** over medium-high heat for 9 to 10 minutes, breaking into small chunks, until browned. Drain; return to pot. Add half EACH: **red sweet pepper** and **onion** (diced); cook for 8 to 10 minutes until vegetables are softened and meat is fully cooked. Add ½ cup thawed **corn niblets** and heat through. Makes approx. 8 tacos. Serve as a DIY taco buffet with tortillas, salsa and taco toppings.



**HIGH STICKING:** Pack skewers of **grilled chunks of veggies** (zucchini, sweet peppers, mushrooms) and **grilled meat cubes** (chicken, steak, lamb or pork) as part of a buffet. Serve along with warmed **pita** or **naan**, **tzatziki** or **mayo** flavoured with **harissa**, **pesto** or **roasted garlic**. Serving tip: place the skewer in the pita, fold over and hold tight while you pull out the stick.



### **SLOW COOKER PULLED**

**SANDWICHES:** In a slow cooker, combine **boneless beef blade pot roast** or **skinless boneless chicken thighs** or **pork shoulder roast** together with enough **barbecue sauce** to cover. Add 1 **large onion**, cut lengthwise into wedges, and some **seasoned diced canned tomatoes** (if desired). Cover and slow cook on LOW for 8 hours. Skim the sauce of any fat. Use forks to pull the meat into shreds and serve warm in some of the cooking sauce as part of a buffet with sliced warmed buns or bread, baked potatoes and coleslaw.



You can opt in grilled tofu for any of the meats featured here but keep in mind that plant-sourced proteins are not the same as those from animal-sources (see p. 14-15).





## *Fruit & Veg Focus*

Often meals out are short on veggies. Here are some helpful tips to get more veggies in when eating out.

- Ask your server to bring a veggie and dip platter to share **before** the beverage order is taken and the bread arrives.
- Start the meal with a vegetable-based salad or soup.
- Ask for more veggies with everything. Swap tomatoes for the home-fries when ordering the breakfast special.
- Salads often have more dressing than you need. Ask for dressings (and condiments) on the side.
- For dessert, choose a fresh fruit cup, applesauce or fruit and yogurt parfait.



Restaurant meals can often serve 2 people. Try splitting or eating family style and share. Pack up any extras to take home for a next-day meal.

## *Healthy Eat-out Strategies*

Practically speaking, there are times when you're going to eat out or eat on the run. Here are some helpful tips to eat well when eating out.

- Look for meals that offer a balanced plate. Include: a quality protein (steak, fish, chicken, burger, beans or eggs), two veggie servings and one whole grain like a whole wheat roll.
- How food is cooked matters: steamed, broiled, grilled, baked or roasted are generally better options than battered, crispy, creamy, saucy or fried.
- Craving fries, milk shakes, ice cream or dessert? Order the smallest size available or get 1 order to share. Or ask for half salad/half fries for the side dish instead of just fries.
- Burgers are popular and can be a balanced meal choice when topped or served with veggies. Skip the bacon and sauces.
- Think whole grain: ask for a whole wheat burger or sub bun, pizza crust, brown rice and try oatmeal for breakfast.
- Quench thirst with water or milk, not sweetened drinks, juice or chocolate milk. Ask for lemon or lime wedges with your water to encourage drinking.



# TAKE STOCK

## of Convenient Healthy Choices

Part of the hurdle to eating well when on the run is that we don't take stock of the convenience that simple wholesome foods can offer. With just a little planning, you can be prepared with healthy convenient options ready to grab and go.

- Bagged arugula and spinach add a nutrient-boost to pizza, sandwiches, soups or tuck into grilled cheese and casseroles prior to cooking.
- Look for single-serve packages of cheese, melba toast, yogurt drinks, applesauce and more.
- Bite-size dippable sweet peppers offer portability for munching with no food waste and no prep.
- Don't underestimate the nutritional value and convenience of frozen fruit and veggie blends. TIP: Include these frozen foods to help keep your cooler-packed foods cold.
- Wash and pat-dry grape tomatoes, grapes and strawberries. Wash up their original store container and line with paper towel. Pack fruit/veg back into their container so they're ready for snacking.
- Invest in a Banana Guard carrier to make sure bananas aren't crushed to mush when on the go.
- Cook ahead: hard-cooked eggs, grilled steak, chicken breast, brown rice, barley and tortellini. All are perfect additions to make leafy green salads more substantial.







# KEY TAKEAWAYS

1. Swap healthy food for ultra-processed food.
2. Offer meals and snacks that support healthy growth and optimize performance.
3. Teach kids hydration basics.
4. Plan and cook meals together.
5. Create a healthy food environment at home and away.