## From Training Diet to Meal Plans

The amount of food in your everyday meal plan varies according to your energy needs. The more you train, the more food you need for energy. By including food from all four food groups in your meals and snacks, you will consume the nutrients you need for top performance.

From the Training Diet: Action Plans chart, choose the Action Plan that matches your sport. Notice the number of servings suggested from each food group. Because athletes use carbohydrate as fuel, the number of servings from the carbohydrate-rich vegetables and fruit and grain products food groups is higher than the number of servings from the proteinrich milk and alternatives and meat and alternative food groups.

Divide the number of servings from each food group into three meals and several snacks. For example, if Action Plan \#2 is closest to your needs and suggests 8 to 14 servings of grain products, you might try the lowest number of servings (8). That would allow 2 servings of grain product at each meal and 2 servings for your snacks. If you are always hungry, you might try 14 servings of grain throughout the day, with 3 servings at each meal and 5 grain servings divided into 2-3 snacks.

A balanced meal has several servings from the carbohydrate-rich vegetables and fruit and from the grain products food groups. Fewer servings are needed from higher protein foods - about one serving from the milk and alternatives group and about one from the meat and alternatives group at each meal. Most meals include some oil or fat, either as part of the food (peanut butter, nuts/seeds, cheese) or added to one or more foods (margarine/ butter, salad dressing). Many meals include fluid in the form of juice, milk, or water.

Your planning formula for each everyday meal:

- 2-6 servings of grain products
- 2-6 servings of vegetables and fruit
- $1 / 2-1$ servings of milk and alternatives
- $1 / 2-1$ servings of meat and alternatives
- 3 servings of oils and fat
- fluid

If you can't eat all of your food in a meal, try to save your drinks towards the end of your meal - this way you won't fill up on liquids first. Athletes who need a very large amount of energy may need to drink most of their fluid between meals rather than as part of their meal.

As an athlete, you need frequent meals and snacks throughout the day to top up your energy supply and keep your energy level steady. You can increase the total energy in your menu by increasing the number of servings of a food or by adding another food from the same or another food group. You can add variety and interest by choosing different foods within each food group throughout the week.

Here is a sample menu that can be expanded from the energy needed in Action Plan \#1 to the energy for Action Plan \#3. The food group designations may help you substitute different food choices to add variety to your diet.

| BREAKFAST: | FOOD GROUP |
| :--- | :--- |
| Orange juice | Vegetables and fruit |
| Whole wheat pancake | Grain products |
| with blueberries | Vegetables and fruit |
| Scrambled egg | Meat and alternatives |
| Milk | Milk and alternatives |
| Margarine | Oils and fats |
| SNACK: | FOOD GROUP |
| Low-fat muffin | Grain products |
| Apple and/or banana | Vegetables and fruit |
| LUNCH: | FOOD GROUP |
| Pita bread | Grain products |
| Mayonnaise | Oils and fats |
| Tuna | Meat and alternatives |
| Raw vegetables: carrots, | Vegetables and fruit |
| cauliflower, zucchini |  |
| Milk/fruit smoothie | Milk and alternatives |
|  | Vegetables and fruit |


| SNACK: | FOOD GROUP |
| :--- | :--- |
| Multigrain date bread | Grain products |
| Milk | Milk and alternatives |


| SUPPER: | FOOD GROUP |
| :--- | :--- |
| Beef and | Meat and alternatives |
| broccoli stir-fry | Vegetables and fruit |
| Brown rice | Grain products |
| with mushrooms and celery | Vegetables and fruit |
| Oil | Oils and fats |
| Peaches | Vegetables and fruit |
| with yogurt topping | Milk and alternatives |
| SNACK: | FOOD GROUP |
| Oatmeal cookie | Grain products* |
| Milk-based hot chocolate | Milk and alternatives* |
| *foods with an * are high in fat and/or sugar, which may not be |  |
| desirable for all athletes. |  |

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Check the following chart to understand how much of each food you would need, depending on whether you use Action Plan 1, 2, or 3.
The chart below uses the following abbreviations:


## ACTION PLANS TO MEAL PLANS

| Food | Action Plan \#1 |  | Action Plan \#2 |  | Action Plan \#3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount | Servings | Amount | Servings | Amount | Servings |
| Breakfast: |  |  |  |  |  |  |
| 10 cm whole wheat pancake | 1 pancake | 1 GP | 3 pancakes | 3 GP | 6 pancakes | 6 GP |
| Orange juice | 125 mL | 1 VF | 125 mL | 1 VF | 250 mL | 2 VF |
| Blueberries | 125 mL | 1 VF | 125 mL | 1 VF | 250 mL | 2 VF |
| Milk | 125 mL | 1/2M | 250 mL | 1 M | 250 mL | 1 M |
| Scrambled egg with milk | $\begin{gathered} 1 \mathrm{egg} \\ 60 \mathrm{~mL} \end{gathered}$ | $\begin{gathered} 1 / 2 M A \\ 1 / 4 M \end{gathered}$ | $\begin{gathered} 2 \text { eggs } \\ 100 \mathrm{~mL} \end{gathered}$ | $\begin{gathered} 1 M A \\ 1 / 3 M \end{gathered}$ | $\begin{gathered} \hline 3 \text { eggs } \\ 150 \mathrm{~mL} \end{gathered}$ | $\begin{gathered} 11 / 2 M A \\ 1 / 2 M \end{gathered}$ |
| Margarine/butter | 15 mL | 1 OF | 45 mL | 3 OF | 90 mL | 6 OF |
| Snack: |  |  |  |  |  |  |
| Low-fat muffin (small) |  |  |  |  | 1 muffin | 2 GP |
| Apple/banana (small) | 1 fruit | 1 VF | 2 fruit | 2 VF | 2 fruit | 2 VF |
| Lunch: |  |  |  |  |  |  |
| Pita bread | 1 pita | 2 GP | 1.5 pita | 3 GP | 2 pita | 4 GP |
| Raw vegetables | 125 mL | 1 VF | 250 mL | 2 VF | 500 mL | 4 VF |
| Milk | 125 mL | 1/2M | 250 mL | 1 M | 250 mL | 1 M |
| Tuna | 125 mL | 1 MA | 125 mL | 1 MA | 125 mL | 1 MA |
| Mayonnaise in tuna | 10 mL | 1 OF | 15 mL | 1 OF | 15 mL | 1 OF |
| Salad dressing veggie dip |  |  |  |  | 30 mL | 2 OF |
| Snack: |  |  |  |  |  |  |
| Multigrain date bread | 1 slice | 1 GP | 2 slices | 2 GP | 3 slices | 3 GP |
| Milk | 250 mL | 1 M | 250 mL | 1 M | 250 mL | 1 M |
| Fruit for smoothie |  |  |  |  | 250 mL | 2 VF |
| Supper: |  |  |  |  |  |  |
| Bread roll |  |  |  |  | 1 roll | $2 G P$ |
| Cooked brown rice | 125 mL | 1 GP | 250 mL | 2 GP | 375 mL | $3 G P$ |
| Mushrooms and celery | 60 mL | 1/2VF | 125 mL | 1 VF | 125 mL | 1 VF |
| Broccoli for stir-fry | 125 mL | 1 VF | 250 mL | 2 VF | 250 mL | 2 VF |
| Vegetable juice |  |  |  |  | 250 mL | 2 VF |
| Beef for stir-fry | 75 g | 1 MA | 75 g | 1 MA | 115 g | $11 / 2 \mathrm{MA}$ |
| Peaches | 125 mL | 1 VF | 250 mL | 2 VF | 250 mL | 2 VF |
| Yogurt topping | 100 mL | 1/2M | 100 mL | 1/2M | 175 mL | 1 M |
| Oil for stir-fry | 10 mL | 1 OF | 15 mL | 1 OF | 15 mL | 1 OF |
| Margarine/butter |  |  |  |  | 10 mL | 1 OF |
| Snack: |  |  |  |  |  |  |
| Oatmeal cookie* | 15 g | 1/2GP | 30 g | 1 GP | 60 g | 2 GP |
| Milk-based hot chocolate* | 125 mL | 1/2M | 125 mL | $1 / 2 M$ | 250 mL | 1 M |


| Food Group | Action Plan \#1 | Action Plan \#2 | Action Plan \#3 |
| :---: | :---: | :---: | :---: |
| Vegetables and fruit | $61 / 2$ servings | 11 servings | 19 servings |
| Grain products | $51 / 2$ servings | 11 servings | 22 servings |
| Milk and alternatives | $31 / 4$ servings | $41 / 3$ servings | $51 / 2$ servings |
| Meat and alternatives | $21 / 2$ servings | 3 servings | 4 servings |
| Oils and fats | 3 | 5 | 11 |

*Foods with an * are high in fat and/or sugar which may not be desirable for all athletes.

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## EAT WELL

Limit foods and beverages that are high in Calories, fat or sugar and have few other nutrients such as baked goods, chocolate and candies, ice cream, fries, chips, fruit flavoured drinks, soft drinks, alcohol, sports and energy drinks, and sweetened hot or cold drinks. You may choose some of these foods in moderation after you have enough servings from the food groups.

Fat: All diets require some fat. If you are an athlete who needs a great deal of energy, you may need some concentrated energy sources higher in dietary fat to help you to "fill up". Check Training Diet: Fat - Get the Essentials for more detail about fat.

Sugar: Sugar adds carbohydrate to help maintain energy. Sugar does not provide other nutrients like vitamins and minerals so vegetables, fruit, cereals and breads, are better quality sources of carbohydrate than sugars.

Alcohol: Like sugar, alcohol provides energy with few other nutrients. As well, alcohol interferes with your recovery from exercise, slowing the replacement of fluid, protein and carbohydrate in your body.

Remember, your everyday eating is important for optimal performance. The more energy you need to participate in your sport, the more carbohydrate-rich foods you need to include in your menu plans.

## Timing: Planning Meals and Snacks Relative to Workouts

As an athlete, you need balanced meals and snacks throughout the day to supply energy and nutrients. Before, during, and after your workouts, some nutrients may need more emphasis than others. By the end of the day, all the food group servings and nutrients should have been consumed.

| BEFORE a workout | Focus on fluid and carbohydrate |
| :--- | :--- |
| DURING a workout lasting <br> less than an hour | Focus on fluid |
| DURING workouts <br> longer than $\mathbf{6 0}$ minutes | Focus on fluid and carbohydrate |
| Immediately AFTER <br> a workout | Focus on fluid, carbohydrate, <br> and protein |

## BEFORE

Whether your workout is a training session or a competitive event, the pre-exercise meal is part of your balanced Action Plan. Fluid is emphasized to ensure you are well hydrated before beginning your activity. Also, your pre-exercise meal may be higher in carbohydrate than everyday meals.

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

Your fluid intake before exercise tops up your fluid level and helps prevent dehydration. Foods rich in carbohydrate are important fuel for your brain and nervous system, allowing you to focus on your skills as well as to perform physical feats. Your pre-exercise meal prevents hunger and provides energy before and
during your training or competition. For comfort, choose foods that are quickly and easily digested, especially before a competition. In some cases, liquid meals may be needed if there is little time before your event or if you tend to have a nervous stomach.

If you have a "nervous stomach" before events, choose lower fibre grain products, juice, or pureed foods (toast or crackers, applesauce or apple juice, soup, yogurt, fruit smoothie, etc.).

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

Legumes (e.g. baked beans) are fibre-rich and can be gasproducing. Unless you eat legumes regularly, they may have too much fibre for comfort.

For some pre-exercise food and fluid suggestions, check the Fluids for Athletes and Fluids and Foods BEFORE Training/ Competition tip sheets.

## DURING

During most exercise sessions lasting up to one hour, your main concern is replacing fluid lost from sweating and breathing hard. Hot and/or humid weather can cause you to lose more than one litre per hour of sweat. During cold weather, there is little water vapour in the air and a substantial amount of fluid can be lost from breathing. Even athletes who train and compete in the water (e.g. swimmers) lose some fluid from sweating.

Training or competitions lasting longer than an hour may cause you to use up all your carbohydrate (glycogen) energy stores. Consuming carbohydrate in a drink (e.g. sport drink) will help maintain your energy and focus.

For suggestions during exercise, check the Fluids for Athletes and Fluids and Foods DURING Training/Competition tip sheets.

## AFTER

After an exercise bout, to replace your lost fluids, you need to drink 1.5 litres of fluid for every kilogram of body weight you lost. Sodium in your beverage helps restore your electrolyte losses and helps you retain the fluid in your body.

Research has shown that carbohydrate consumed in the hours after exercise moves readily into muscles to replace the glycogen (muscle energy) that was used during exercise. Restoring glycogen helps to prepare you for your next exercise session. Similarly, a small amount of protein is needed following exercise to speed up the repair of damaged muscle tissue.

To maximize recovery, check the suggestions included in the Fluids for Athletes and Fluids and Foods AFTER Training/ Competition tip sheets.

During multi-event days like tournaments, the meal or snack after one game or event may be the pre-event meal/snack for the next competitive session. The amount and type of food will vary based on the length of time you have between the meal/ snack and the next competition. If the recovery fluid and food intake after one exercise session is your pre-exercise nutrition for the next activity, think "fluid" and "carbohydrate". Be sure you have

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time for digestion. Meals may need to be kept small if time between events is limited. You may find that "sipping" and "nibbling" work well for your sport. For more hints regarding food on multi-event days check the Tournament Tips tip sheet.

## BALANCING THE NUTRIENTS

Protein-rich foods are digested more slowly than carbohydrates, delaying hunger during a long event but they may cause abdominal discomfort during an intense event. Low-fat milk, yogurt, lean meat, skinless chicken, non-breaded fish, eggs, and/ or legumes (beans, peas, and lentils) are protein-rich foods that help delay hunger. If your only protein choice is a higher fat food (peanut butter, nuts/seeds, cheese), use only a small amount with your carbohydrate choice (bread, crackers, fruit, etc.).

Dietary fat slows down digestion. Before most training and competition situations, low fat food is best. French fries, chips, breaded chicken or fish, hot dogs, hamburgers, cream or cheese sauces, margarine, salad dressing, cheese, peanut butter, nuts, seeds, and chocolate contain a substantial amount of dietary fat and may cause discomfort during exercise.

Although you may have fewer servings of protein-rich foods and less fat/oil in meals just before an exercise session, meals after exercise or during the day (or week) should make up for this temporary imbalance by adding a little extra protein and fat.

## SPLITTING MEALS/SNACKS AROUND TRAINING OR COMPETITION

If your training or competition is near a mealtime, your meal can be divided into two smaller meals/snacks with some food consumed before the exercise session and the remaining part of the meal eaten after the training or competitive session. Look for foods to carry with you or food outlets where you can buy part or all of a meal. Pack snack items to have on hand. Some snacks can be part of your next meal.

BEFORE a breakfast training session or competition:

| Fruit juice | Vegetables and fruit |
| :--- | :--- |
| Toast | Grain products |
| low fat cream cheese | Milk and alternatives |
| Water | Fluid |

Water Fluid

AFTER a breakfast training session or competition:

Berries
Cereal
Toast
Milk
Egg or peanut butter
-88 or peanut buter
Food outlet option for breakfast:

Fruit juice
English muffin
Milk or Latté
Egg

Vegetables and fruit
Grain products
Grain products
Milk and alternatives
Meat and alternatives

Vegetables and fruit
Grain products
Milk and alternatives
Meat and alternatives

BEFORE a lunchtime training session or competition:
For lunchtime competitions or training sessions, eat a hearty breakfast and top-up with a high carbohydrate snack a few hours before the event.
$\begin{array}{ll}\text { Fruit } & \text { Vegetables and fruit } \\ \text { Small toasted bagel } & \text { Grain products }\end{array}$
Grain products
Fluid

AFTER a lunchtime training session or competition:

Fresh or canned fruit
Salad or raw vegetables
Bread for sandwich
Yogurt
Lean meat or fish for sandwich
Food outlet option for lunchtime:
Salad or raw vegetables
Whole grain bread roll
Milkshake
Sliced meat or chili

Vegetables and fruit Vegetables and fruit Grain products Milk and alternatives
Meat and alternatives

Vegetables and fruit Grain products Milk and alternatives Meat and alternatives

BEFORE a dinnertime training session or competition:
For dinnertime competitions or training sessions, eat a hearty lunch several hours before the event and top-up with a high carbohydrate snack a few hours before.

Tomato sauce with
Small bowl of pasta
Skinless chicken breast
Water Fluid

Vegetables and fruit Grain products
Meat and alternatives

AFTER a dinnertime training session or competition:

Baked potato
Fresh peaches
Rye or multigrain bread
Yogurt
Canned beans in tomato sauce

## Food outlet option for dinnertime:

Submarine sandwich
Minestrone soup
Milk or chocolate milk
Tuna filling in the sub

Vegetables and fruit Vegetables and fruit
Grain products
Milk and alternatives
Meat and alternatives

## Late night RECOVERY nutrition:

After an evening training session or competition, it is never too late to eat your recovery meal.

AFTER an evening training session or competition:

| Cereal | Grain products <br> Vegetables and fruit <br> Fruit <br> Milk |
| :--- | :--- |
| Milk and alternatives |  |

## FOOD SAFETY CONSIDERATIONS

To avoid getting sick, keep your foods at the right temperature. Foods that are to be eaten as hot (temperature) dishes, (e.g. meat, casseroles, rice) should not be served lukewarm. Foods that are to be eaten cold (e.g. deli meats, salads, sandwiches, milk, custard, etc.) should be served at a cold temperature.
Avoid bacterial contamination of meals and snacks. Keep cold foods cold and hot foods hot. Bacteria reproduce quickly at room temperature.

