Nutrition for Special Olympics Athletes

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Outline

- Healthy Eating…What is it?
- Know Your Food: Food Guide and Nutrition Labeling
- Nutrition on a Budget
- Snacking
- Supplements
- Weight Maintenance and Weight Loss
- Timing

Healthy Eating…What is it?

- **Eat foods with a high nutrient to calorie ratio**
  - Eat foods that are high in nutrients relative to their calorie content
    - Eg. vegetables, whole grains, fruits
  - Limit empty calories (foods that provide calories but are low in nutrients)
    - Eg. White bread, candy, soda
- **Eat foods in their most natural state**
  - Eat foods that were modified very little from the time they left the farm
    - Eg. fruits, vegetables, unrefined grains, minimally processed meats
  - **Food Processing** is the chemical or physical modification of food for a specific purpose (eg. safety, taste, increased shelf life, etc.)
    - Healthy example of food processing: pasteurizing milk to kill bacteria
    - Less healthy example of food processing: heavy use of additives and packaging techniques to make meat shelf stable
    - Try to reduce consumption of most heavily processed foods

Healthy Eating…What is it?

How to communicate these ideas to athletes….

- **Eat foods with a high nutrient to calorie ratio**
  - "Eat foods with lots of vitamins and minerals. Fruits and vegetables are the best sources of these."
  - Every time you eat a meal, vegetables should take up half of your plate."
- **Eat foods in their most natural state**
  - "When grocery shopping, stick to the perimeter of the store and stay away from the center isles."
  - "Try to eat fewer foods that come out of a package."
  - "Meals should be prepared in your kitchen and not in a factory."

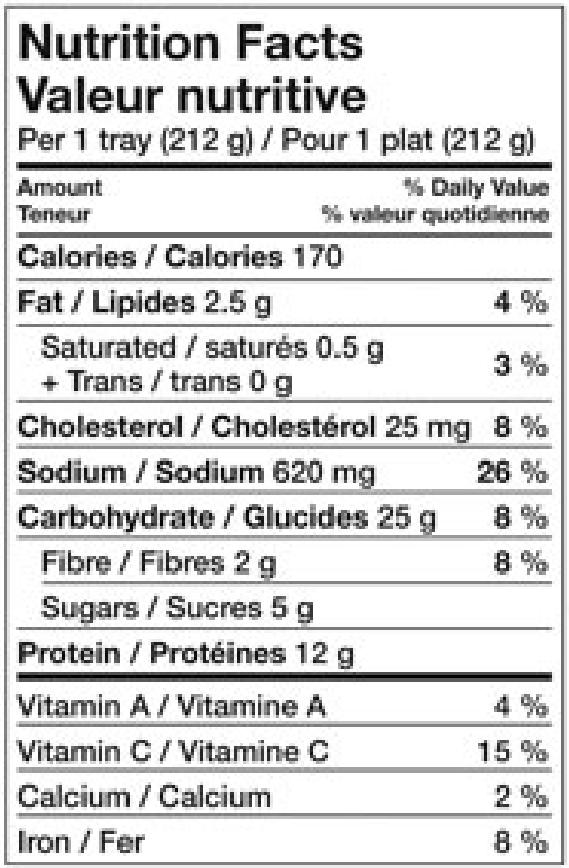
Know Your Food

- Canada's Food Guide
- Nutrition Facts Table
- Revised labels
- Activities

Canada's Food Guide

- Features
  - Newest version created in 2011
  - Guidelines for all ages and genders
  - Tells how many servings from each food group we should eat per day
  - Serving sizes demonstrated with pictures and text
    - Some are surprising!
  - Many helpful hints for healthy eating and living
  - Instructions for how to read nutrition labels
- Keep on your fridge for fast reference!
  - Free printable copy: http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/order-commander/index-eng.php

Nutrition Labels



Nutrition Facts
Valeur nutritive
Per 1 tray (212 g) / Pour 1 plat (212 g)

Amount / Teneur	% Daily Value / % valeur quotidienne
Calories / Calories 170	
Fat / Lipides 2.5 g	4 %
Saturated / saturés 0.5 g + Trans / trans 0 g	3 %
Cholesterol / Cholestérol 25 mg	8 %
Sodium / Sodium 620 mg	26 %
Carbohydrate / Glucides 25 g	8 %
Fibre / Fibres 2 g	8 %
Sugars / Sucres 5 g	
Protein / Protéines 12 g	
Vitamin A / Vitamine A	4 %
Vitamin C / Vitamine C	15 %
Calcium / Calcium	2 %
Iron / Fer	8 %

Sometimes the info will be for an amount less than what is in the container (Eg. half bottle of coke)

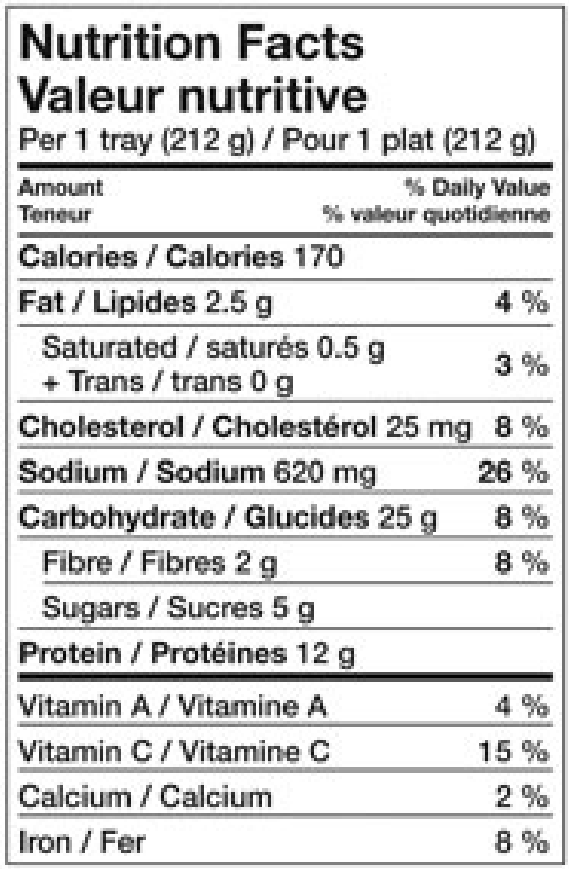
- %DV shows what percentage of your daily allotted value this food provides
- 5% is a little, 15% is a lot

Sugar and Fibre may not add up to total carbs because there may be other types of carbs in food (eg. starch)

Sugars represents both added and natural sugars

Nutrition Labels

How to communicate with Athletes……



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Vitamin A / Vitamine A	4 %
Vitamin C / Vitamine C	15 %
Calcium / Calcium	2 %
Iron / Fer	8 %

Less than 5% is a little, more than 15% is a lot

Look at the amount listed. Will you eat this much or more than this?

Try to almost always eat foods with 0% trans fat

High fibre foods are healthier!

If the sugar has been added in, look for the option with the lowest amount

Revised Nutrition Labels

Most notable changes:

- More easily readable format
- Black bar separates what you should eat less of and what you should eat more of
- Added sugars are listed
- Asterisks at bottom explain %DV and rule of "5% or less is a little…"

Nutrition Facts
Valeur nutritive

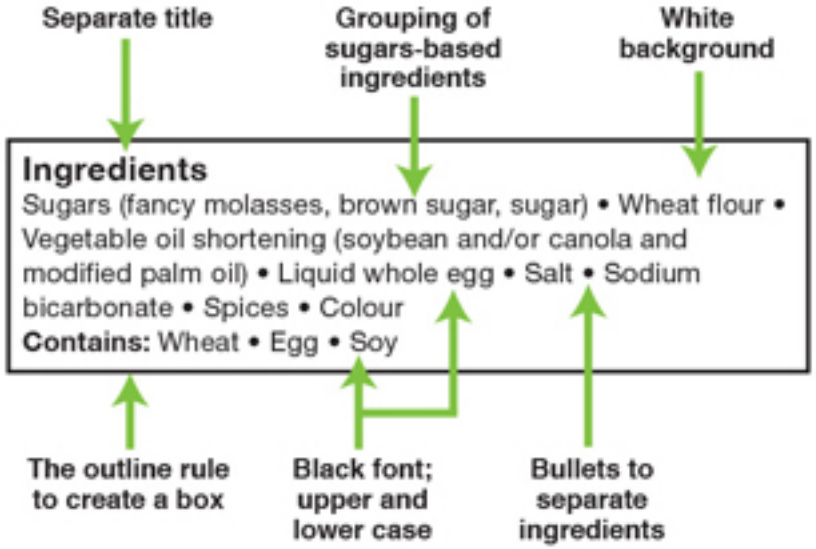
Per 3/4 cup (175 g) / par 3/4 tasse (175 g)

Calories 170	% Daily Value (DV)* / % valeur quotidienne (VQ)
Fat / Lipides 5 g	**1 %**
Saturated / saturés 3.5 g	**18 %**
Trans / trans 0.2 g	**10 %**
Cholesterol / Cholestérol 20 mg	
Sodium / Sodium 450 mg	**20 %**
Carbohydrate / Glucides 23 g	
Total Sugars / Sucres totaux 18 g	**18 %**
Added Sugars / Sucres ajoutés 12 g	
Fibre / Fibres 0 g	
Protein / Protéines 7 g	
Vitamin D / Vitamine D 1.3 µg	9 %
Calcium / Calcium 220 mg	17 %
Iron / Fer 2 mg	10 %
Potassium / Potassium 150 mg	4 %

*5% DV or less is a **little**; 15% DV or more is a **lot**
5% VQ ou moins c'est **peu**; 15% VQ ou plus c'est **beaucoup**

Nutrition Facts Table Revisions

INGREDIENTS: WHEAT FLOUR, FANCY MOLASSES, VEGETABLE OIL SHORTENING (SOYBEAN AND/OR CANOLA AND MODIFIED PALM OIL), BROWN SUGAR, LIQUID WHOLE EGG, SUGAR, SALT, SODIUM BICARBONATE, SPICES, COLOUR
CONTAINS: WHEAT, EGG, SOY



Nutrition on a Budget

#1 way to save money is cooking rather than eating out!

- **Benefits of cooking your own food:**
  - Healthier because you know exactly what's in it
  - Cheaper!

- **How to avoid eating out:**
  - Cooking takes time. Always add time for cooking into your daily or weekly schedule
  - Cook in **large batches**
    - Make enough to last you **several days or all week**
    - Make extra to **freeze**. You can eat frozen foods when you run out of time to cook
  - Always keep food with you on the go
  - Stock up on **Tupperware** to organize your cupboards and your prepared foods

***Idea: reserve one night a week to go on a cooking spree! Make tons of food so you can eat it throughout the week. This way you won't have to cook so often.*

Snacking

- **Why are snacks important for athletes?**
  - We need carbohydrates every **3 hours** to keep our blood sugar up
  - Blood sugar gives us energy for activities
- **What makes up a healthy snack?**
  - Snacks must include carbohydrates for energy
    - Carbs may be in any form (simple sugars, starches, grains, etc)
    - Healthier options are lower in refined sugars
  - Protein and fat are also important to reduce hunger and contribute to daily fat/protein intake

Snacking

Healthy Granola Bar Recipe

Ingredients:

- 3.5 cups Rolled Oats
- 1/5 cup Pumpkin Seeds
- 1/5 cup Sunflower Seeds
- ½ cup raisins
- 1.5 tsp cinnamon
- 3 Ripe bananas
- 2/3 cup unsweetened applesauce
- 1/4 cup honey (add more as desired)

Directions:

- Preheat oven to 350 degrees. Line 9x13 inch cookie sheet with parchment paper.
- In medium bowl, mash bananas until smooth. Still in honey and applesauce.
- Mix dry ingredients in separate bowl.
- Add wet to dry and mix until combined.
- Press mixture into baking sheet.
- Bake until golden brown. About 25-30 min.
- Allow to cool. Cut into bars. Store in fridge.

Supplements

- Supplements are *not* necessary for most people
  - If we eat a nutritious diet, we get most of the vitamins and minerals we need
  - To ensure you are getting all of your vitamins and minerals, eat a variety of different foods from all different food groups
  - Avoid getting into the habit of eating the same foods every day
- Consult your doctor before deciding to take a supplement

Supplements

- When may supplements be necessary?
  - Iron
    - Women, vegetarians and athletes are at higher risk for iron deficiency
  - Protein
    - Vegans may not get sufficient protein and may consider protein supplements
  - Vitamin D
    - Individuals who are exposed to *very* little sunlight may become Vit D deficient
  - Other
    - Some individuals have medical conditions (eg. allergies, digestion or absorption problems) that may cause them to develop a deficiency.
    - Certain medications may cause deficiencies.
    - Consult your doctor if you feel that one of these may apply to you.

Weight Loss and Maintenance

- Energy Balance
  - Every day we use up (“burn”) calories in our daily activities
  - If we eat more calories than we use up in a day, we will store these extra calories as fat
  - If we eat fewer calories than we use up in a day, our bodies will take calories from our fat stores
  - At the end of the day, we want to eat the same number of calories we use up
    - This is called *energy balance*

Weight Loss and Maintenance

- Negative Energy Balance
  - To lose weight (fat), we need to consume fewer calories each day than we use up
  - This way, our bodies will take calories from our fat stores
  - This is called *negative energy balance*
- The number of calories we use up in a day varies greatly and depends on one's gender, age, activity level and metabolism
  - See this chart for your estimated value: http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/basics-base/1_1_1-eng.php

Weight Loss and Maintenance

- We cannot rely on cutting calories alone to lose weight, however
  - We also need to eat a healthy, nutritious diet
  - If we do not eat a nutritious diet, it could have effects on our body that…
    - Keep us from losing weight
    - Cause us to gain weight

***Research is showing that refined white flour and sugar may play a large role in this.*

A simple solution? Advise your athletes to eat less white bread, French fries, soda and junk food

Nutrition Timing for Athletes

We need carbohydrates before during and after a work out to ensure our muscles are full of carbs to use for energy

- **Before** an exercise session
  - Eat your pre-exercise meal **1-4 hours** prior to exercising
    - Do not eat within 1 hour of exercising as this could cause discomfort
  - This meal should have 1g of carbohydrate ("CHO") per kg of body weight per hour prior to exercise (**1g/kg/hr**)
    - Eg. If you are eating 2 hours before and you weigh 70kg, your meal should have (1g x 70kg x 2hr) 140g of carbohydrate
  - Do not eat foods very high in **fiber** prior to exercise as this increases bowel movements, causing possible discomfort

**Too complicated?? Skip ahead 3 slides to see a simplified guide to nutrition timing

Nutrition Timing for Athletes

- **During** an exercise session
  - ***Eating during exercise is *only* recommended when:
    - Doing **endurance** exercise (non-stop) for more than **1-1.5 hours** (eg. running)
    - **Intermitently** exercising (start-stop) at ***very* high intensity** for more than **1 hour** (eg. soccer)
  - Consume 0.7g CHO per kg of body weight per hour of exercise
    - Eg. if you weigh 70 kg and are exercising 3 hours, consume (0.7g x 70kg x 3hr) 147g CHO over the course of the activity
  - Types of CHO
    - Remember that carbohydrates are sugars, starches, etc.
    - Consume whatever type is easiest for athletes
      - This is typically a sugared drink (eg. juice) or very compact CHO source (eg. raisins, sport chews)
    - Low in fibre to prevent discomfort

Nutrition Timing for Athletes

- **After** an exercise session
  - Carbohydrate
    - Goal is to replenish used up carbohydrate stores in muscle
    - If next exercise session in ***more* than 8 hours** away, timing of post-exercise carb intake is less important
    - If next exercise session in ***less* than 8 hours** away:
      - Begin consuming carbs within **half an hour** following the work out
      - Consume 1 g CHO/kg/hour for the first 2-4 hours after the work out (depending on exercise intensity)
  - Protein
    - Protein becomes important after a work-out because we need protein to **build** and **repair muscle**
    - Consume **15-25g** of protein within **half an hour** of the work out

Nutrition Timing for Athletes *Simplified….*

- **Before**
  - Consume a meal high in carbohydrates **1-4 hours** prior to the work out (the more time before, the larger the meal)
- **During**
  - ONLY needed if **endurance** exercising for more than **1-1.5 hours** OR if exercising in **high intensity bursts** for more than **1 hour**
  - Drink a sugared drink, such as juice or a sport drink. Add some salt if you will be sweating.
- **After**
  - If next session in less than **8 hours** away…
    - In the first **half hour** following the work out, begin consuming **carbs** and consume some **protein**
    - Eat a meal high in carbohydrates within 4 hours following the work out

Thank you for Listening!

Questions?