

Section D: Appendices



Appendix A: Background for Food and Beverage Criteria

Background for Food and Beverage Criteria

Fat

Fat is an important part of a healthy diet because it provides essential fatty acids and energy (calories). It also helps the body absorb fat soluble vitamins including A, D and E¹. *Eating Well with Canada's Food Guide* recommends that nutritious foods not be restricted because of their fat content for young children. They are growing and have relatively high energy needs and may require healthy higher fat choices from the four food groups.

High fat foods can help children meet their energy needs for growth and development, especially children who eat a small quantity of food. Research also suggests that, for this age group, a low fat diet could lead to inadequate intake of certain nutrients (e.g. vitamins).² For this age group, the type of fat is more important, than the amount, in determining health outcomes.

Healthy fats include polyunsaturated and monounsaturated fats. These fats are found in vegetable oils, nuts and seeds, fish, flax and non-hydrogenated margarines. These fats help to lower the risk of heart disease in children and adults. For this reason, healthy fats are included in *Canada's Food Guide* as part of a healthy diet.

Saturated and trans fats are unhealthy fats and can increase the risk of heart disease in children and adults. Saturated and trans fats should be avoided or reduced.^{1,3} Saturated fats also raise blood levels of "bad" cholesterol. Saturated fats are found in high fat milk and milk products (e.g. butter and cream), fatty meats (e.g. hot dogs, bologna, salami, pepperoni, ribs, regular ground beef) and tropical oils (palm kernel, coconut oil in store-bought cookies, crackers, granola bars).

Naturally occurring trans fats are found in very small amounts in dairy products as well as beef and lamb.¹

Artificial trans fats are made when liquid oil is changed into a solid fat (e.g. hydrogenated fats). These hydrogenated fats are found in many processed baked goods (e.g. store bought muffins, cookies, cakes, pastries), deep fried and battered products (e.g. french fries, chicken nuggets, fish sticks), some crackers, shortening products, and hard margarines.

To reduce the amount of trans fats, choose products made without hydrogenated or partially hydrogenated oils.

After two years of age, children can start to transition towards lower fat milk and milk products as their growth slows.

The Food and Beverage Criteria will guide you to choose healthy fats as well as avoid unhealthy fats in your menu.

Fibre

The Adequate Intake (AI) for fibre is 19 grams/day for children between the ages of 1 and 3 and 25 grams/day for children between the ages of 4 and 8.³ Canadian children do not eat enough fibre.² Ensuring that children eat enough fibre can help to prevent obesity, diabetes, diet-related cancers and reduce the risk of heart disease and constipation.³ Whole grains, vegetables and fruit, and legumes are high in dietary fibre. Fruit juice is lower in fibre compared to whole vegetables and fruit, and therefore whole vegetables and fruit should be eaten more often than juice.

Eating Well with Canada's Food Guide recommends that at least half of the grains consumed each day be whole grains. Whole grains provide fibre and other nutrients that children need for healthy growth and development. Having a wide variety of whole grains on the menu will help ensure children are meeting their nutritional needs. The Food and Beverage Criteria will help in selecting whole grains as well as other grain products that are nutritionally dense and rich in fibre.

Sodium

Children 4-8 years old should consume no more than 1900 mg sodium per day. Toddlers and infants should consume even less (1500 mg/day).³ Eating too much sodium can lead to high blood pressure and other health problems. The Canadian Community Health Survey (2004) revealed that the sodium intake of children one to eight years of age exceeds the recommended limits, which increases their risk of adverse health effects.²

Most of the sodium we eat comes from processed, packaged foods, so the Food and Beverage Criteria will provide guidance to help you select low sodium foods and recipes for your menu.

Sugar

Some very nutritious foods naturally contain sugar, such as fruit and milk. Sugars are also added to many products to increase their sweetness. Added sugars are found in sweetened beverages such as fruit punch, sodas and some milk based beverages. Candies, chocolate, sweet desserts and syrups, are other sources of added sugars. Added sugars are indicated in the Ingredient List of product labels. Examples include cane juice, syrup, dextrose, fructose, sucrose, glucose, maltose, lactose, fruit juice concentrate.

International and national recommendations recommend choosing foods and beverages without added sugars to maintain a healthy weight, decrease cardiovascular risk, avoid dental problems and meet nutritional needs. Total sugar intake can be limited by reducing intake of foods and beverages containing naturally occurring sugars (milk, milk products and fruits) and limiting foods and beverages with added sugars.³

Although a healthy choice, vegetable and fruit juices contain naturally occurring sugar. Research has shown that drinking too much juice may lead to early childhood tooth decay, diarrhea and being overweight. Drinking too much juice can also replace other nutrient dense foods. Children may fill up on juice and not eat their snacks or meals. For these reasons, it is recommended that children drink water or plain milk in place of juice and to limit juice to no more than ½ cup (125 mL) per day.^{4,5,6} Children are often receiving juice and other sweetened beverages outside of child care, therefore the Food and Beverage Criteria limit juice to no more than twice a week.

Sugar substitutes

Sugar substitutes include artificial sweeteners (e.g. acesulfame-potassium, aspartame, erythritol, neotame, sucralose, thaumatin) and sugar alcohols (e.g. sorbitol, isomalt, lactitol, maltitol, mannitol and xylitol).⁷ Sugar substitutes are used to lower sugar and calorie content of food and beverages such as sweetened beverages, yogurts, sodas, cookies and many other foods.

Children have small appetites. If they eat foods with sugar substitutes regularly, they may not get the nutrients and energy they need for healthy growth and development.⁷ This is particularly the case with artificially sweetened beverages, which are low in nutritional value and often replace more nutrient dense beverages such as milk. For these reasons, the Food and Beverage Criteria avoid sugar substitutes.

Portion sizes

Canada's Food Guide is intended for individuals two years of age and older. The foods served between six months and two years should include a variety of foods from *Canada's Food Guide*, so that by the time toddlers are two years old, they are consuming a variety of foods along with the other children.

Children have small stomachs that fill quickly. Small, frequent, nutritious and energy-dense meals and snacks, including a variety of foods from the four food groups are recommended to meet the nutrient and energy needs of infants, toddlers and young children.

The amount of food consumed by a child will vary from day to day and from child to child. Generally the size of a portion increases with age. For example, a two-year-old may eat a half slice of bread, whereas a four-year-old is more likely to eat a whole slice.

However, this can change based on the child's appetite, growth spurts, how the child is feeling, distraction in the room, etc. When preparing foods it is important that you offer each child sufficient foods and let the children determine how much they are going to consume.

A Food Guide Serving (FGS) is a reference amount. It is not intended to necessarily represent what someone would eat at one time, but it can be used as a consistent measure to compare how much people eat with the recommendations in *Canada's Food Guide*. Children may not eat a full serving of *Canada's Food Guide* or may they eat more than 1 serving from a food group. A guideline to follow is to offer children $\frac{1}{2}$ of the Food Guide Serving for each food group and provide more food if children are still hungry.

Processed foods

Children's nutrition needs are different from adults. They have small stomachs and require frequent nutrient dense meals. A focus on healthy foods, prepared with little to no added fat, sugar and salt, will help ensure they meet their nutrient needs. These healthy foods are whole foods or minimally processed and nutrient dense. Offering foods that are not nutrient dense could mean that a child may not receive their nutrition requirements.

Menus should focus on foods that are fresh and/or minimally processed with little to no additives or preservatives. The more a food is processed, the more nutrients that are lost. When foods are prepared from a recipe with whole ingredients, the ingredients can be modified or reduced to control the amount of added fat, sugar and salt. In addition to reducing fat, sugar and salt, healthy ingredient substitutions can also increase the nutrients available in the foods (e.g. fibre and calcium).

References

1. Health Canada. *It's Your Health: Trans Fat, Healthy Canada*. Accessed at <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/food-aliment/trans-eng.php>, 2011.
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3. Institute of Medicine. *Dietary Reference Intakes: The Essential Guide to Nutrient Requirements*. Washington: The National Academic Press; 2006.
4. Canadian Paediatric Society. *Healthy Teeth for Children*. Accessed at <http://www.caringforkids.cps.ca/healthybodies/HealthyTeeth.htm>, 2011.
5. American Academy of Pediatrics. The Use and Misuse of Fruit Juice in Pediatrics. *Pediatrics* 12001;70(5):1210-1213.
6. Dietitians of Canada. Toddler and Preschool Nutrition. Practice-Based Evidence in Nutrition. Accessed at www.pennutrition.com, 2011.
7. Health Canada. *It's Your Health: The Safety of Sugar Substitutes*. Accessed at http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/food-aliment/sugar_sub_sucre-eng.php, 2011.

**Additional references used in development
of Food and Beverage Criteria**

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Alberta Nutrition Guidelines For Children and Youth: A Childcare, School and Recreation/Community Centre Resource Manual. Government of Alberta, 2008.

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Dietitians of Canada. 2009.

Connecticut Child Care Nutrition Standards, Action Guide for Child Care Nutrition and Physical Activity Policies. Connecticut State Department of Education, 2010.

Health CheckTM Nutrient Criteria. Heart and Stroke Foundation, 2011.

Appendix B: Healthy Substitutions

Healthy Substitutions: Cooking

Improve the nutritional value and lower the amount of fat, sugar and salt.

To	Instead of	Try
Use less fat	Frying	<ul style="list-style-type: none"> • Grilling, baking, roasting, broiling, or poaching
	Butter, margarine, or oil in the amount called for	<ul style="list-style-type: none"> • Using less than the recipe calls for • Replacing with cooking spray, water, or broth, or using a non-stick frying pan
	Fatty cuts of beef, pork, lamb, or sausage	<ul style="list-style-type: none"> • Lean cuts of meat such as “loin” or “round”, and trimming visible fat • Fish, dried peas, beans, or lentils
	Cooking poultry with skin on	<ul style="list-style-type: none"> • Removing the skin and excess fat • Adding colour with paprika, herbs, or tomato sauce
	Ground beef or pork in hamburgers, meatloaf, meat balls, etc.	<ul style="list-style-type: none"> • Adding it raw and cooking until tender in the liquid, or browning in a non-stick skillet or one that has been sprayed with a non-stick cooking spray
	Browning meat in oil or other fat for a stew or sauce	<ul style="list-style-type: none"> • Adding it raw and cooking until tender in the liquid, or browning in a non-stick skillet or one that has been sprayed with a non-stick cooking spray
	Cream	<ul style="list-style-type: none"> • Using skim, 1% or 2% milk, or evaporated milk or equal parts of low-fat milk and evaporated milk • Using fortified milk (one part skim milk powder to four parts low-fat or skim milk) • Using low-fat sour cream

To	Instead of	Try
Use less fat	Full-fat cream cheese Full-fat sour cream	<ul style="list-style-type: none"> • Using fat-free or low-fat cream cheese, yogurt cheese, or cottage cheese puréed until smooth • Replacing all or part with fat-free or low-fat sour cream, cottage cheese, part skim ricotta, yogurt cheese, or plain yogurt (250 mL yogurt blended with 15mL cornstarch if it will be cooked)
Use less sugar	Fruit canned in syrup Syrup High-sugar baked goods	<ul style="list-style-type: none"> • Using fresh fruit or fruit canned in its own juice or water • Using puréed fruit or small amounts of syrup • Using the suggestions in Healthy Substitutions – Baking
Use less sodium	Canned broth Regular canned foods Processed, cured, or smoked meats Instant packaged foods, especially with salty powder or sauce packets Commercial condiments	<ul style="list-style-type: none"> • Using homemade stock, or commercial reduced-sodium or salt-free stock, or bouillon in soups, gravies, sauces, dressings, etc. • Using foods canned in water, preferably with no salt added • Using reduced-sodium products • Draining and rinsing canned foods for 30 seconds • Using fresh foods when possible • Using fresh or frozen meat or poultry cooked without salt or high-sodium smoked meats ingredients • Preparing product from scratch using fresh ingredients • Using only a small amount of the prepared powder or sauce • Using homemade herb and spice mixtures • Using chopped or sliced vegetables or fruit instead of pickles • Using homemade chunky fruit or vegetable sauces like salsa, chutney or relish • Using small amounts (1 tsp (5 mL) to 1 tbsp (15 mL)) of condiments such as ketchup, soy sauce, commercial salad dressings and salsas, etc. • Substituting reduced-sodium products

Healthy Substitutions: Baking

Improve the nutritional value and lower the amount of fat, salt and sugar

To	Instead of	Try
Boost fibre	250 mL white flour	<ul style="list-style-type: none"> Using 125 mL white flour plus 125 mL whole wheat or whole grain flour Using 175 mL white flour plus 50 mL ground flaxseed Adding wheat bran or oatmeal to breads and muffins
Use less fat	<p>125 mL fat (e.g. oil, margarine or butter)</p> <p>250 mL fat (e.g. oil, margarine or butter)</p> <p>250 mL solid fat (e.g. margarine, butter, or shortening in yeast breads)</p> <p>Cream</p>	<ul style="list-style-type: none"> Using 50 mL mashed fruit plus 50 mL fat; use applesauce, apple butter, mashed banana, puréed prunes or puréed pumpkin (using mashed fruit may reduce the baking time by 25%) Using 150 to 175 mL fat Using 175 mL ricotta cheese plus 50 mL solid fat Using low-fat evaporated milk, or low-fat sour cream
Use less salt	Using the amount called for	<ul style="list-style-type: none"> Omitting the salt or using less
Use less sugar	<p>250 mL sugar</p> <p>250 mL chocolate chips</p> <p>Fruit canned in syrup</p>	<ul style="list-style-type: none"> Using 150 to 175 mL sugar; add cinnamon, vanilla, or almond extract Using 125 to 250 mL chopped nuts or chopped dried fruits such as cranberries, raisins, apricots or cherries (or a combination) Using fruit canned in its own juice or water, or fresh fruit

Appendix C: Resources and Tools

Menu Template

Infant Feeding Plan

Infant Feeding Plans are developed at the request of parents or when foods from home are provided for children between birth and 17 months old. The following is a list of possible questions that may be used when developing an infant feeding plan:

- What types of food does the child currently consume?
- Have solid foods been successfully introduced, and, if so, what types?
- What textures have been successfully introduced?
- What are the child's food preferences?
- What are the child's self-feeding abilities?
- Are there any dietary considerations or special requests?
- Does the child have any identified allergies, food intolerances or any suspected concerns?
- What are the child's feeding times/routines?
- Are there any foods that the parents wish to wait to introduce?
- What is the plan for updating and making changes to a feeding plan?
- To what extent will the child care setting be involved in introducing new solids/textures?
- What is the plan for breast milk supply (e.g. liquid or frozen)?
- How should the child care setting respond in the event that breast milk is unavailable (e.g. runs out)?
- May the child eat modified items from menu?
- Are there any food requests based on medical issues?
- Will the child consume food from home as well as from the center? If so, how should the child care setting respond in the event that foods and beverages brought from home are unavailable (e.g. run out)?

These questions may be helpful when developing an Infant Feeding Plan. Infant Feeding Plans are especially beneficial to ensure there is ongoing communication between the child care setting and the family.

Feeding plans may be created for infants (children between the ages of birth to 17 months) upon enrolment in a regulated child care setting at the request of parents or when the parent requests that foods be supplied from home. This will enable ongoing communication between the infant's parent/guardian and the care provider or the child care staff, including the cook and can be used in conjunction with the infant daily record.

Infant Feeding Plan

Name of Child:	Date of Birth:	Age at time of enrolment:
<p>Does your child currently consume:</p> <p><input type="checkbox"/> Breastmilk*</p> <p><input type="checkbox"/> Formula</p> <p><input type="checkbox"/> Solid foods**</p> <p>Solid foods that have been introduced:</p>	<p>Feeding method:</p> <p><input type="checkbox"/> Breastfed</p> <p><input type="checkbox"/> Bottle</p> <p><input type="checkbox"/> Spoon</p> <p><input type="checkbox"/> Cup</p> <p>Feeding abilities: (e.g. fed by caregiver, self feed with fingers, spoon and/or fork)</p> <p>Textures: (e.g. pureed, minced, diced)</p>	<p>Special instructions This can include: breastmilk or formula storage and supply, food allergies, religious/cultural food requests, food requests related to medical conditions etc. This can also include if the infant will consume food from home at the parents'/guardians' request, or consume the foods served in the centre.</p>

* Regulated child care settings welcome mothers to breastfeed anywhere in the facility or home. Ongoing communication between centre staff and the parent/guardian will occur to make sure there is an adequate supply of your breastmilk for your child at the centre. No other form of nutrition will be provided unless instructed by the parent/guardian.

** It is important that infants receive nutrient dense, iron containing foods at 6 months of age. This may include foods from the Meat and Alternative group, including meats, fish, poultry, cooked egg yolks, tofu and well-cooked legumes

