

# B

## Food Guidance in the United States and Canada

### FOOD GUIDES

#### *The U.S. Food Guide Pyramid*

Dietary guidance began in the early 1900s in the United States with the development of food guides that identified food groups and patterns for eating. In the 1940s, the food groups were identified as the Basic 7. By 1960, guidance was simplified into the basic four food groups. As nutrition science evolved, so did concern about some nutrients in excess (e.g., fats, saturated fat, cholesterol, sodium) and their relation to heart disease and cancer. These concerns led to the promulgation of the U.S. Dietary Goals in 1977 by the Senate Select Committee on Nutrition and Human Needs. The U.S. Department of Agriculture (USDA) responded by adding a fifth food group of fats, sweets, and alcohol at the bottom of the basic four, with the guidance “Use these in moderation” (PCRM, 1997).

The first edition of the *Dietary Guidelines for Americans* was published in 1980 (USDA/HHS, 1980). To assist people in putting the Guidelines into practice, USDA released the Food Guide Pyramid (USDA, 1992).

The assumptions underlying the Food Guide Pyramid were that it would (1) promote overall health rather than treatment or prevention of a specific disease; (2) be based on up-to-date research on nutrient composition, foods commonly consumed, and nutrient recommendations such as the Recommended Dietary Allowances (RDAs) and the Dietary Reference Intakes (DRIs); (3) address the

total diet; (4) be useful to the target audience—the consumer; (5) be realistic; (6) be flexible; (7) be practical; and (8) be evolutionary.

The Food Guide Pyramid is based on the 1989 RDAs (NRC, 1989) and the 1990 Dietary Guidelines (Welsh et al., 1993) and incorporates data on foods used by the target population and data on nutrient composition of foods. The nutritional goals for the Pyramid are to provide a guide for individuals that is adequate in protein, vitamins, minerals, and dietary fiber, without excessive amounts of calories, fat, saturated fat, cholesterol, sodium, sugars, and alcohol (Shaw et al., 1996). It has been widely used as a resource for nutrition educators. As science advances, the Pyramid, as with other dietary guidance programs, should be reassessed to see that it meets current nutrition recommendations.

### *Canada's Food Guide to Healthy Eating*

*Canada's Food Guide to Healthy Eating* (Health Canada, 1991) was developed from the Nutrition Recommendations (Health Canada, 1990b) and Canada's Guidelines for Healthy Eating (Health Canada, 1990a), through the work of technical groups and task forces, consumer research, and consultations with stakeholder groups. It provides details on daily food selection to meet nutritional needs of individuals aged 4 years and over and is designed for the general public with a reading level of grade seven.

The Food Guide is presented as a tear sheet with a consumer-oriented booklet, *Using the Food Guide* (Health Canada, 1997), which explains the concepts of the tear sheet. Nutrition professionals engaged in health promotion have also developed fact sheets to assist in using the Food Guide.

Nutritionists working with specific cultural groups or those with special dietary preferences, including Indigenous Peoples, have developed food guides that incorporate the local, cultural foods. An example is the *Food Guide for the Northwest Territories* (Northwest Territories Aboriginal Head Start Program, 2002). The Canadian guides are also updated as new science and better understanding of nutritional needs become available.

### *Uses of Food Guides in Planning for Individuals*

The U.S. Food Guide Pyramid contains basic information needed for an individual to plan a day's food choices. It lists major food groups and subgroups, the ranges in numbers of servings suggested,

and the amounts to count as a serving for each group. It also gives a range of servings intended to meet various caloric needs.

*Canada's Food Guide to Healthy Eating* can be used for different people in various life stages by attention to the top statement and the side bar describing number of servings (a lower and higher number of servings are given). Practitioners counseling individuals or individuals themselves can adjust the recommendation for age, body size, gender, activity level, pregnancy, breast-feeding, and individual variation. The Canadian Food Guide assumes that choosing foods according to the Guide can provide all nutrients needed for good health of most people. It recommends that supplements for special needs (e.g., for iron and folate during pregnancy) should be chosen after consultation with a physician or dietitian (Health Canada, 1997).

A physiological counterpart to *Canada's Food Guide to Healthy Eating* is the *Handbook for Canada's Physical Activity Guide to Healthy Active Living* (Health Canada, 1998). This guide provides a simple, consistent set of guidelines to achieve health benefits by being physically active. Silhouette figures on the Food Guide refer to the Vitality program, which integrates guidance (enjoy eating well, being active, and feeling good about oneself) that leads to an enhanced quality of life and maintenance of healthy weight.

## FOOD LABELING AND NUTRIENT CONTENT CLAIMS

Food labels are an important and direct means of communicating product information between buyers (including the consumer) and sellers. They provide basic product information (e.g., name, ingredients, grade, etc.); they may provide health, safety, and nutrition information; and they serve as a vehicle for food marketing, promotion, and competition such as nutrition claims.

### *Development of Nutrition Labels—United States*

In 1969 the White House Conference on Food, Nutrition, and Health recommended that the federal government consider developing a system for identifying the nutritional qualities of food. In 1973 the Food and Drug Administration (FDA) issued regulations requiring nutrition labeling on foods that contained one or more added nutrients or that had a label or advertising that included claims about the food's nutritional properties or its usefulness in the daily diet. The term "U.S. RDA" was also established at that time by FDA as the food label reference values for vitamins, minerals, and protein to be used in the companion voluntary nutrition label-

ing program resulting from this legislation. The U.S. RDAs were based on the adult age and gender groups with the highest values in the 1968 Recommended Dietary Allowances established for various population groups (NRC, 1968). Nutrition labeling took effect in 1975 for foods containing added nutrients or advertising claims and became voluntary for almost all other foods.

In 1990, Congress passed the Nutrition Labeling and Education Act, which required nutrition labeling for most foods (except meat and poultry) and authorized the use of nutrient content claims and appropriate FDA-approved health claims. These rules went into effect in 1994. In addition, voluntary nutrition information programs became effective in 1992. Nutrition information was made available under FDA's voluntary point-of-purchase nutrition information program for many raw foods, including the 20 most frequently eaten raw fruits, vegetables, and fish, and under USDA's program for the 45 best-selling cuts of meat.

Figure B-1 presents the Nutrition Facts panel that appears on current labels in the United States. The label reference value, Daily Value (DV), comprises two sets of dietary standards: the Daily Reference Values (DRVs) and Reference Daily Intakes (RDIs). Only the Daily Value term appears on the label. DRVs have been established for macronutrients that are sources of energy: fat, saturated fat, total carbohydrate (including fiber), and protein, as well as for cholesterol, sodium, and potassium.

DRVs for the energy-producing nutrients are based on an intake of 2,000 calories per day. This level was chosen, in part, because it approximates the caloric requirements for postmenopausal women, the life stage and gender group that has the highest risk for excessive intake of calories and fat.

DRVs for the energy-producing nutrients and fiber are calculated as follows:

- fat based on 30 percent of calories
- saturated fat based on 10 percent of calories
- carbohydrate based on 60 percent of calories
- protein based on 10 percent of calories (the DRV for protein applies only to adults and children over 4 years of age; RDIs for protein for special groups have been established)
- fiber based on 11.5 g of fiber per 1,000 calories

The DRVs for some nutrients represent the uppermost limit that is considered desirable under current public health recommendations. For example, the DRVs for total fat, saturated fat, cholesterol,

<b>Nutrition Facts</b>			
Serving Size 1 cup (228g)			
Serving Per Container 2			
<b>Amount Per Serving</b>			
<b>Calories</b> 250	Calories from Fat 110		
<b>% Daily Value*</b>			
<b>Total Fat</b> 12g	<b>18%</b>		
Saturated Fat 3g	<b>15%</b>		
<b>Cholesterol</b> 30mg	<b>10%</b>		
<b>Sodium</b> 470mg	<b>20%</b>		
<b>Total Carbohydrate</b> 31g	<b>10%</b>		
Dietary Fiber 0g	<b>0%</b>		
Sugars 5g			
<b>Protein</b> 5g			
Vitamin A	4%		
Vitamin C	2%		
Calcium	20%		
Iron	4%		
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:			
	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

**FIGURE B-1** U.S. food label.  
SOURCE: FDA (2000).

and sodium are less than 65 g, 20 g, 300 mg, and 2,400 mg, respectively.

### *Daily Values—Reference Daily Intakes*

The percent of DV stated on food labels for vitamins and minerals is based on the RDIs. The term RDI replaces the term U.S. RDA in current food labeling. However, most of the RDI values are the same as the U.S. RDAs that were provided on food labels in the past, and thus are also based on the 1968 RDAs. RDI values have

also been established for nutrients for which RDAs were not established in 1968 (e.g., vitamin K, chromium). The RDI term was adopted to avoid confusion that might arise between the U.S. RDA used on food labels and the RDAs published by the National Academy of Sciences.

On the current label's "Nutrition Facts" panel, manufacturers are required to provide information on certain nutrients. The mandatory (underlined) and voluntary components and the order in which they must appear are listed in Box B-1.

The nutrients that are required on the label were selected because they address today's health concerns. The order in which they must appear was designed to reflect the priority of the then current dietary recommendations.

The nutrition information is presented in a defined serving size, which is the amount of food customarily eaten at one time. The serving sizes that appear on food labels are based on lists of Reference Amounts Customarily Consumed Per Eating Occasion, established by FDA (1999).

#### *Current Nutrient Content Claims—United States*

The following is a list of core terms that may be used to describe the level of a nutrient in a food under current regulations (FDA, 1999).

- *Free*. This term means that a product contains no amount of, or only trivial or "physiologically inconsequential" amounts of, one or more of these components: fat, saturated fat, cholesterol, sodium, sugars, and calories.

- *Low*. This term can be used on foods that can be eaten frequently without exceeding dietary guidelines for one or more of these components: fat, saturated fat, cholesterol, sodium, and calories. Thus, descriptors are low fat: 3 g or less per serving; low saturated fat: 1 g or less per serving; low sodium: 140 mg or less per serving; very low sodium: 35 mg or less per serving; low cholesterol: 20 mg or less and 2 g or less of saturated fat per serving; low calorie: 40 calories or less per serving.

- *Lean and extra lean*. These terms can be used to describe the fat content of meat, poultry, seafood, and game meats. Lean: less than 10 g of fat, 4.5 g or less of saturated fat, and less than 95 mg of cholesterol per serving and per 100 g; extra lean: less than 5 g of fat, less than 2 g of saturated fat, and less than 95 mg of cholesterol per serving and per 100 g.

**BOX B-1** Nutrients on the U.S. Nutrition Facts Panel

- total calories
- calories from fat
- calories from saturated fat
- total fat
- saturated fat
- polyunsaturated fat
- monounsaturated fat
- cholesterol
- sodium
- potassium
- total carbohydrate
- dietary fiber
- soluble fiber
- insoluble fiber
- sugars
- sugar alcohol (for example, the sugar substitutes xylitol, mannitol, and sorbitol)
- other carbohydrate (the difference between total carbohydrate and the sum of dietary fiber and sugars)
- protein
- vitamin A
- percent of vitamin A present as  $\beta$ -carotene
- vitamin C
- calcium
- iron
- other essential vitamins and minerals

NOTE: Underlined components are required to appear on the panel.

SOURCE: FDA (1999).

- *High*. This term can be used if the food contains 20 percent or more of the DV for a particular nutrient in one serving.
- *Good source*. This term means that one serving of a food contains 10 to 19 percent of the DV for a particular nutrient.
- *Reduced*. This term means that a nutritionally altered product contains at least 25 percent less of a nutrient or calories than the regular, or reference, product. However, a “reduced” claim cannot be made on a product if its reference food already meets the requirement for a “low” claim.
- *Less*. This term means that a food, whether altered or not, contains 25 percent less of a nutrient or calories than the reference food.

### *Development of Food Labels—Canada*

Since 1961 the Guide for Food Manufacturers and Advertisers has been the reference document on policies and regulations for the labeling and advertising of foods in Canada (CFIA, 1996). The current Guide to Food Labelling and Advertising (CFIA, 1996) pro-

vides labeling and advertising requirements, policies, and guidelines that deal with statements and claims made for foods, including alcoholic beverages. Guidelines and provisions set out in the Food and Drugs Act and Food and Drugs Regulations, the Consumer Packaging and Labeling Act (CPLA), and other relevant legislation are provided. The responsibility for the administration of food-related provisions in the CPLA was transferred to the Canadian Food Inspection Agency in 1999.

Nutrition labeling in Canada has been voluntary, but under new regulations it has become mandatory on prepacked foods, with few exceptions. The nutrition label has a consistent format and always includes information on calories and the following 13 nutrients: fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fiber, sugars, protein, vitamin A, vitamin C, calcium, and iron. Nutrient content is declared for a stated serving size, which may be different than that noted on the food guide. Vitamins and minerals are expressed as percent of a DV. Initially, DVs will be the same as the Recommended Daily Intakes that were developed for food labeling only, and are based on the highest Recommended Nutrient Intakes (RNIs) for individuals aged 2 and above from the 1983 Canadian RNIs, excluding needs during pregnancy and lactation. Figure B-2 provides an example of the new label, which is similar to the U.S. Nutrition Facts label.

### *Current Nutrient Content Claims—Canada*

Amendments to the Canadian Food and Drugs Regulations (CFIA, 1996) regulate the compositional criteria and specific labeling requirements for all permitted nutrient content claims. Permitted nutrient content claims include claims that a product is “free” of a substance (e.g., fat-free, free of trans fatty acids, calorie-free, sugar-free); is “low in” or “reduced or lower in” a substance (e.g., calories, fat, saturated fatty acids, trans fatty acids, cholesterol, sugar); has “no added” sodium, salt, or sugar, or is a “source of,” a “high source of,” a “very high source of,” or an “excellent source of” a nutrient (e.g., protein, fiber, vitamins, and minerals). In each case, compositional criteria must be met. For example, a food claiming it is “cholesterol-free” would have less than 2 mg of cholesterol per standard serving size, and would also need to meet the criteria to be “low in saturated fatty acids.”

The proposed amendments to the Food and Drugs Regulations will also allow for five diet-related health claims to be made relative to reduced risk of high blood pressure, osteoporosis, heart disease,

<b>Nutrition Facts</b>	
Per 1 cup (264g)	
Amount	% Daily Value
<b>Calories 260</b>	
<b>Fat 13g</b>	<b>20%</b>
Saturated Fat 3g + Trans Fat 2g	<b>25%</b>
<b>Cholesterol 30mg</b>	
<b>Sodium 660mg</b>	<b>28%</b>
<b>Carbohydrate 31g</b>	<b>10%</b>
Fibre 0g	<b>0%</b>
Sugars 5g	
<b>Protein 5g</b>	
Vitamin A 4%	Vitamin C 2%
Calcium 15%	Iron 4%

**FIGURE B-2** Canadian food label.  
SOURCE: Health Canada (2002).

some types of cancer, and dental caries. The amendments specify the wording for the permitted health claim and the compositional criteria that foods would have to meet in order to qualify for the claim.

## DIETARY GUIDELINES IN THE UNITED STATES AND CANADA

The current U.S. and Canadian dietary guidelines are not generally related to micronutrients, with the exception of guidelines pertaining to “variety.” The intent of these guidelines (i.e., Canadian “Enjoy a variety of foods” and U.S. “Let the Pyramid guide your food choices”) is to promote a greater likelihood of meeting recommended intakes of all nutrients through choosing a variety of foods.

*Dietary Guidelines for Americans*

The fifth edition of the *Dietary Guidelines for Americans* was released in 2000 (USDA/HHS, 2000). The focus of the Guidelines is on good health, including reducing risk for chronic diseases. The Guidelines are based on fitness, the Food Pyramid, food safety, and the ability to choose foods sensibly.

The concept of the Guidelines began with the 1977 Dietary Goals of the United States developed by the Senate Select Committee on Nutrition and Human Needs. These goals focused on reducing the incidence of chronic disease rather than on reducing nutritional deficiencies, and recommended quantifiable targets for carbohydrates, fats, and cholesterol in the American diet.

The *Dietary Guidelines for Americans* (Box B-2), developed jointly by USDA and the Department of Health and Human Services (HHS), was first published in 1980 and subsequently revised in 1985, 1990, 1995, and 2000. It provides recommendations based on current scientific knowledge about the association between dietary intake and risk of major chronic diseases. The National Nutrition Monitoring and Related Research Act of 1990 (Public Law 101-445, Title III) required publication of the Guidelines at least every five years beginning in 1985. This legislation also required review by the secretaries of USDA and HHS of all federal dietary guidance-related publications for the general public.

The Guidelines serve as a framework for consumer education messages. They also form the basis of federal food, nutrition educa-

**BOX B-2** Dietary Guidelines for Americans

- Aim for a healthy weight.
- Be physically active each day.
- Let the Pyramid guide your food choices.
- Eat a variety of grains daily, especially whole grains.
- Choose a variety of fruits and vegetables daily.
- Keep food safe to eat.
- Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
- Choose beverages and foods to moderate your intake of sugars.
- Choose and prepare foods with less salt.
- If you drink alcoholic beverages, do so in moderation.

SOURCE: USDA/HHS (2000).

tion, and information programs and are used for individual counseling, in group education settings such as schools and outpatient settings, and for general food and nutrition planning. The Guidelines are widely available through professional nutritionists' and dietitians' associations, health clinics, government-sponsored health settings, the food industry, and the media.

### *Nutrition Recommendations for Canadians*

In Canada, national guidelines for consideration of nutrition programs and policies have been in effect for more than 60 years. They have been used by professional and other organizations, government at all levels, the food and food service industry, and by individual consumers. The most recent review of Canada's national nutrition guidelines took place from 1987 to 1989 by two committees: one that considered revisions to the RNIs and one that considered consumer advice and implementation strategies. This work resulted in the current Nutrition Recommendations (Health Canada, 1990b), and, ultimately, *Canada's Food Guide to Healthy Eating* (Health Canada, 1991). The Nutrition Recommendations (Box B-3)

#### **BOX B-3** Canadian Nutrition Recommendations

- The Canadian diet should provide energy consistent with the maintenance of body weight within the recommended range.
- The Canadian diet should include essential nutrients in amounts recommended.
- The Canadian diet should include no more than 30% of energy as fat (33 g/1,000 kcal or 39 g/5,000 kJ) and no more than 10% as saturated fat (11 g/1,000 kcal or 13 g/5,000 kJ).
- The Canadian diet should provide 55% of energy as carbohydrate (138 g/1,000 kcal or 165 g/5,000 kJ) from a variety of sources.
- The sodium content of the Canadian diet should be reduced.
- The Canadian diet should include no more than 5% of total energy as alcohol, or two drinks daily, whichever is less.
- The Canadian diet should contain no more caffeine than the equivalent of four regular cups of coffee per day.
- Community water supplies containing less than 1 mg/L should be fluoridated to that level.

SOURCE: Health Canada (1990b).

**BOX B-4** Canada's Guidelines for Healthy Eating

- Enjoy a VARIETY of foods.
- Emphasize cereals, breads, other grain products, vegetables, and fruit.
- Choose lower-fat dairy products, leaner meats, and foods prepared with little or no fat.
- Achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating.
- Limit salt, alcohol, and caffeine.

SOURCE: Health Canada (1991).

were directed to health professionals and describe desirable characteristics of the diet in relatively technical terms. These recommendations were “translated” to Canada’s Guidelines for Healthy Eating (Box B-4), which provide key messages directed to consumers. These guidelines were designed to be action-oriented, positive statements that would lead to the selection of diets that meet the Nutrition Recommendations.