## NUTRITION LABELLING HANDBOOK


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# NUTRITION LABELLING HANDBOOK 

Food Division<br>Consumer Products Branch Consumer and Corporate Affairs Canada

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## TABLE OF CONTENTS

Section ..... Page
1 Nutrition Labelling Format ..... 1
2 Energy ..... 6
3 Protein and Amino Acids ..... 11
4 Fat, Fatty Acids and Cholesterol ..... 14
5 Carbohydrate, Sugars and Dietary Fibre ..... 19
6 Sodium/Salt and Potassium ..... 24
7 Vitamins and Mineral Nutrients ..... 26
8 Biological Role of Nutrients ..... 38
9 Suggested Serving Sizes ..... 40
10 Schedule K - Reasonable Daily Intake For Various Foods ..... 48
11 Foods to which Vitamins, Mineral Nutrients or Amino Acids Can be Added ..... 50
12 References ..... 53

## NUTRITION LABELLING HANDBOOK

## 1. NUTRITION LABEILING

* is a standardized presentation of the nutrient content of a food;
* is designed to provide consumers with useful information that is not misleading or deceptive;
* is voluntary, but when used, should comply with the Guidelines on Nutrition Labelling and with the Food and Drug Regulations.


## IMPORTANT NOTES

1. When a nutrition claim is made on a food label, the required nutrient content declaration per serving of stated size that is triggered must appear on the label. When a nutrition claim is made on an advertisement, the required declaration must be in the advertisement OR on the label (B.01.304).
2. The accuracy of the nutrient content declaration of a food is the responsibility of the manufacturer.
3. Statements pertaining to the nutrient content of a food are required, in general, to be grouped with the list of ingredients [B.01.008(1)(b)]. However, when the nutrients are declared in the "Nutrition Labelling Format" as presented in this Handbook, this information is permitted to appear anywhere on the label, except on the bottom of the container (B.01.310).
4. Nutrition Labelling is required in both French and English, and may be presented bilingually with either language first.
5. The "core list", which consists of energy (in both Calories and kilojoules) and protein, fat and carbohydrate (in grams), must always be included when the nutrition labelling format is used.
6. The nutrient content indicated on the label must be based on a serving of stated size of the edible portion of the food as sold, in the same units used for the net quantity declaration (see Section 11 of this Handbook). The word "serving" ("portion" in French) must also be used. The serving size may be given in a common or household measure. When a serving size has been chosen by a manufacturer, that size should be used consistently on all label formats, except for single serving containers in which the declared serving size is equal to the net quantity of the food.
7. US RDA's (Recommended Daily Allowances) are not permitted on Canadian labels.
8. Numbers in brackets in the text refer to sections of the Food and Drug Regulations.
9. In the text:
$\leq$ means less than or equal to,
$\geq$ means greater than or equal to.

## NUTRITION LABELLING FORMAT

## Nomenclature, Order of Listing and Units Allowed:

1. Heading
2. Serving size: metric units as sold (household measure should be declared in brackets).
3. Energy (expressed in both Calories and kilojoules), protein, fat and carbohydrate constitute the "core list" and must be included when the nutrition labelling format is used.
4. If one of these fat components, excluding linoleic acid, is listed, all four (in addition to fat) must be listed. Linoleic acid may be listed provided the four fat components and fat are also listed.
No other fat components may be listed.
5. Declaration of one carbohydrate component does not require the declaration of any others.
6. If either sodium or potassium is listed, both must be listed.
7. Only these names may be used on labels for these vitamins.
Vitamins and mineral nutrients must be stated as \% of Recommended Daily Intake. If less than $5 \%$ of Recommended Daily Intake, they may be listed provided no claims relate to them.
8. Other vitamin or mineral nutrients with no established Recommended Daily Intake must be named and their amounts given in milligrams per serving of stated size.
1 NUTRITION INFORMATION NUTRITIONNELLE2
per $x \mathrm{~g}$ or mu serving(x cups, items, etc.)par portion de g g ou:mL( $x$ tasses, unites, etc.)

PERCENTAGE OF RECOMMENDED DAILY INTAKEPOURCENTAGEDE LAPPORT OUOTIDIEN
RECOMMANDE


## EXAMPLES OF NUTRITION LABELLING

Nutrition information may be presented in English and French separately as in Examples 1.1 and 1.2 or in a bilingual format such as Example 1.3.

Example 1.1: With core list only:


Example 1.2: With core list, sodium and potassium and some vitamins and mineral nutrients

| BAK | S WITH: AUCE | HARICOTS SECS AVEC SAUCE TOMATE |  |
| :---: | :---: | :---: | :---: |
| NUTRITION per 260 g serv | ATION | INFORMATION NUTRITIONNELLE par portion de 260 g (1 tasse) |  |
| Energy | $\begin{aligned} & 291 \mathrm{Cal} \\ & 1220 \mathrm{~kJ} \end{aligned}$ | Énergie | $\begin{gathered} 291 \mathrm{Cal} \\ 1220 \mathrm{~kJ} \end{gathered}$ |
| Protein | 14 g | Protéines | 14 g |
| Fat | 3 g | Matières grasses | 3 g |
| Carbohydrate | 52 g | Glucides | 52 g |
| Sodium | 1180 mg | Sodium | 1180 mg |
| Potassium | 802 mg | Potassium | 802 mg |
| PERCENTAG DAILY INTA | COMMENDED | POURCENTAG QUOTIDIEN R | L'APPORT MANDÉ |
| Thiamine | $11 \%$ | Thiamine | $11 \%$ |
| Riboflavin | $8 \%$ | Riboflavine | 8 \% |
| Folacin | 27 \% | Folacine | 27 \% |
| Calcium | $13 \%$ | Calcium | $13 \%$ |
| Iron | 62 \% | Fer | 62 \% |

## EXAMPLES OF NUTRITION LABELLING (cont'd)

Example 1.3: Bilingual presentation with core list, sodium and potassium, and some vitamins and mineral nutients


## 2. ENERGY

Energy must be expressed in both Calories (Cal) and kilojoules (kJ) per serving of stated size (B.01.301).

$$
1 \text { Calorie }=1 \mathrm{Cal}=1 \text { kilocalorie }=4.184 \text { kilojoules }=4.184 \mathrm{~kJ}
$$

Calories should be rounded to the nearest whole number.
Kilojoules should be rounded to the nearest 10 kJ for energy values of 10 kJ or more, and to the nearest kJ for energy values below 10 kJ .

## CALCULATING ENERGY

The energy value of foods may be calculated using either average Atwater factors, as shown in Example 2.1, or using specific Atwater factors which are derived from digestibility studies on specific foods, as shown in example 2.2.

AVERAGE ENERGY CONTENT OF NUTRIENTS

|  | $\mathrm{Cal} / \mathrm{g}$ | $\mathrm{kJ} / \mathrm{g}$ |
| :--- | :---: | :---: |
| protein | 4 | 17 |
| fat | 9 | 37 |
| carbohydrate | 4 | 17 |
| alcohol | 7 | 29 |

2 Carbohydrate is considered to be total carbohydrate including dietary fibre. When calculating the energy value of dietary fibre each gram should be considered as contributing 4 Calories ( 17 kilojoules) unless specific conversion factors have been established, or there is evidence to the contrary.

Example 2.1: Calculating energy content of a food using average energy values:
250 ml homemade macaroni and cheese may contain:
18 g protein
23 g fat
42 g carbohydrate

Using the average energy values:

$$
\begin{array}{ll}
\text { protein } \quad 18 \times 4 & =72 \\
\text { fat } & 23 \times 9 \\
\text { carbohydrate } & =207 \\
& \\
\\
\text { Total energy } & =447 \text { Calories }
\end{array}
$$

One Calorie $=4.184 \mathrm{~kJ}$

$$
447 \mathrm{Cal} \times 4.184=1870.25 \mathrm{~kJ} \quad \text { (Rounded }=1870 \mathrm{~kJ})
$$

## Example 2.2: Calculating energy content of a food using specific energy factors':

250 ml cooked oatmeal contains:
3 g protein
1 g fat
13 g carbohydrate
The specific energy factors for oatmeal are:
protein $\quad 3.46 \mathrm{Ca} / \mathrm{g}$
fat $\quad 8.37 \mathrm{Cal} / \mathrm{g}$ carbohydrate $4.12 \mathrm{Cal} / \mathrm{g}^{*}$

Total energy is therefore

| from protein | $3 \times 3.46=10.38$ |
| :--- | :--- |
| from fat | $1 \times 8.37$ |
| from carbohydrate | $13 \times 4.12=\underline{53.37}$ |

Total energy 72.31 (rounded $=72$ Calories)
One calorie $=4.184 \mathrm{~kJ}$
$72.31 \mathrm{Cal} \times 4.184=302.5 \mathrm{~kJ}$ (Rounded $=300 \mathrm{~kJ})$

2 No correction need be made for dietary fibre when the specific factors are used to calculate energy from carbohydrate.

## ENERGY CLAIMS

| CLAMMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "Calorie-reduced" | Only for foods for special dietary use and must: <br> * be $\geq 50 \%$ reduced in Calories compared to the same food not Calorie-reduced (B.24.006) | * core list (energy, protein, fat, carbohydrate), mannitol, sorbitol \& xylitol if used; and polydextrose, if used, with a statement of its possible laxative effect; <br> The advertisement AND the label must state: <br> * "recommended for Calorie-reduced diets" <br> The label must state: <br> * "Calorie-reduced" on the principal display panel in close proximity to, and in the same type size as, the common name. (B.24.011) <br> These claims must not imply that the food itself has weight-reducing properties. |
| b) "low-Calorie" <br> "low in energy" <br> "light in Calories" <br> "lite in Calories" <br> "light in energy" <br> "lite in energy" | Only for foods for special dietary use and must: <br> * be $\geq 50 \%$ reduced in Calories; <br> and <br> * provide not more than 15 Cal /average serving; <br> and <br> * provide not more than $30 \mathrm{Cal} /$ reasonable daily intake (Schedule K) (B.24.007) (see Section 10 of this Handbook) | * core list (energy, protein, fat, carbohydrate), mannitol, sorbitol, xylitol if used; and polydextrose, if used, with a statement of its possible laxative effect; <br> The advertisement AND the label must state: <br> * recommended for "Calorie-reduced diets" <br> The label must state: <br> * "low-Calorie" on the principal display panel in close proximity to, and in the same type size as, the common name. (B.24.012) <br> These claims must not imply that the food itself has weight-reducing properties. |


| CLAIMS | COMPOSITIION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| c) " (\% or fraction or number) less or fewer Calories than (naming the reference food)" <br> "lower in Calories than..." | Compared to the reference food it must be: <br> $* \geq 25 \%$ reduced in energy; <br> and <br> * have a significant absolute reduction in energy | * Calories and kilojoules per serving, preceded by the word "energy" <br> (B.01.301) <br> and <br> * (the $\%$ or fraction or number) less or fewer Calories than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is reduced in energy <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; and <br> ii) in the advertisement when the claim is made in the advertisement. |
| d) "light" <br> "lite" <br> "light (naming the common or brand name)" <br> "lite (naming the common or brand name)" | In general, these claims cannot be used alone, without further qualification. The food must meet the composition requirements of: <br> * a Calorie-reduced food as described in a) above <br> or <br> * a low-Calorie food as described in b) above <br> or <br> * a food containing fewer Calories than the reference food as in c) above. | Must meet the corresponding label and/or ad requirements of a), b) or c) EXCEPT in an advertisement these claims may be used alone provided that: <br> * all supporting information is on the label <br> and <br> * no other nutrition statement or claim is made in the advertisement. |
| e) "Calorie free" | $* \leq 1 \mathrm{Cal} / 100 \mathrm{~g}$ of food | Calories and kilojoules per serving, preceded by the word "energy" <br> (B.01.301) |
| f) "source of energy" | $* \geq 100 \mathrm{Cal} /$ serving | Calories or kilojoules per serving preceded by the word "energy" <br> (B.01.301) <br> Claim must not imply "long lasting energy" from a food consisting mainly of carbohydrate. <br> Claims are prohibited if they imply that one food provides enough energy to recover from or accomplish physical activities or to carry a person on to the next meal. |
| g) "instant energy" | -- | prohibited |


| CLAMMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| h) "light" dinner <br> "lite" dinner <br> "light" meal <br> "lite" meal | * must be $\leq 300 \mathrm{Cal}$; <br> and <br> * must contain at least one average-sized serving (as indicated in Canada's Food Guide) from each of the following two groups of foods: <br> * meat, fish, poultry, legumes, nuts, seeds, eggs OR milk or other dairy products (excluding butter, cream, sour cream, ice cream, ice milk and sherbet), <br> and * vegetables, fruits OR cereal products | * must carry a declaration of the energy value of the meal, grouped together either: <br> a) with the most prominent claim stating the food is light/lite, <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |

## 3. PROTEIN AND AMINO ACIDS

Protein follows energy in the nutrition labelling format and is expressed in grams per serving of stated size. Individual amino acids, if declared, are also expressed in grams and should follow protein (see label below).

The quantity of protein and amino acids should be rounded to the nearest whole number for amounts of 10 g or more, and to the nearest tenth of a gram for amounts less than 10 g . If no protein is present, its absence is to be indicated by a zero.

A statement or claim with respect to proteins or amino acids, collectively or by name, is permitted provided a Reasonable Daily Intake of the food, as defined in Schedule K of the Food and Drug Regulations (see page 46 of this Handbook), has a protein rating of 20 or more (B.01.305).

The following statements on a label or in an advertisement are NOT regarded as claims for protein and, therefore, do not require the food to have a protein rating $\geq 20$ :

* "protein" as a part of the common name of an ingredient;
* amino acids declared in a list of ingredients;
* single amino acid preparations sold as foods;
* foods represented for use in gluten-free diets;
* declaration of phenylalanine on a food containing aspartame or a sweetener that contains aspartame;
* foods represented for use in protein or amino acid restricted diets;
* declaration of the amount of protein contained in a food.

| NUTRITION INFORMATION NUTRITIONNELLE |  |
| :---: | :---: |
| per x g o (x cups, par portion (x tasses, |  |
| Energy/énergie | $\begin{aligned} & \text { x Cal } \\ & \text { x kJ } \end{aligned}$ |
| Protein/protéines | x g |
| methionine/méthionine | x g |
| tryptophan/tryptophane | x g |
| valine | x g |
| Fat/matières grasses | x g |
| Carbohydrate/glucides | x g |

## CALCULATING PROTEIN RATING

The protein rating of a food is calculated by multiplying the quantity of protein present in a Reasonable Daily Intake of the food (Column I below) by the quality of the protein, which is the protein efficiency ratio (PER) of the food (Column 2 below).

## Protein Rating of Certain Foods

Column (1) x Column (2) $=$ Column (3)

| Food | Protein \% | Reasonable Daily Intake (g) | (1) <br> Protein in <br> Reasonable Daily <br> Intake (g) | (2) <br> Protein <br> Efficiency <br> Ratio (PER)* | (3) <br> Protein Rating |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Gelatin | 85 | 10 | 8.5 | -2.8 | 0 |
| Almonds | 20.0 | 30 | 6.0 | 0.4 | 2.4 |
| Wheat germ | 25.2 | 5 | 1.3 | 2.9 | 3.8 |
| Rice | 7.6 | 30 | 2.3 | 1.7 | 3.9 |
| Corn, whole | 3.7 | 100 | 3.7 | 1.2 | 4.4 |
| Wheat, whole | 9.9 | 30 | 3.0 | 1.5 | 4.5 |
| Oats, rolled | 14.2 | 30 | 4.3 | 2.2 | 9.5 |
| Beans, navy (dry) | 21.4 | 45 | 9.6 | 1.2 | 11.5 |
| Bread, white | 8.4 | 150 (5 slices) | 12.6 | 1.0 | 12.6 |
| Lentils, cooked | 7.7 | 100 | 7.7 | 1.7 | 13.1 |
| Peanuts | 26.9 | 28 | 8.1 | 1.7 | 13.8 |
| Chickpeas, cooked | 9.3 | 100 | 9.3 | 1.7 | 15.8 |
| Wieners | 10.8 | 100 | 10.8 | 2.1 | 22.7 |
| Soybeans, heated | 34.9 | 30 | 10.5 | 2.3 | 24.1 |
| Bologna | 13.6 | 100 | 13.6 | 2.1 | 28.7 |
| Pork, ham | 15.2 | 100 | 15.2 | 2.7 | 41.0 |
| Cheese, cheddar | 25.0 | 57 | 15.0 | 2.8 | 42.0 |
| Kidney, beef | 15.0 | 100 | 15.0 | 2.9 | 43.5 |
| Liver, beef | 19.7 | 85 | 16.7 | 2.7 | 45.1 |
| Egg, whole | 12.8 | 100 (2 eggs) | 12.8 | 3.8 | 48.6 |
| Pork, tenderloin | 19.9 | 100 | 19.9 | 3.3 | 65.7 |
| Beef, muscle | 21.0 | 100 | 21.0 | 3.2 | 67.2 |
| Fish | 23 | 100 | 23 | 3.6 | 82.8 |
| Milk, whole | 3.5 | 852 ml (3.5 cups) | 31.5 | 2.8 | 88.2 |

a Official Method for Determining the Protein Efficiency Ratio is from HPB Method FO-1, October 15, 1981, Health and Welfare Canada

PROTEIN AND AMINO ACID CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "source of" "contains" <br> "good source" <br> "high in" <br> "high" | Reasonable Daily Intake of a food must have a protein rating $\geq 20$ <br> or <br> 30 g of breakfast cereal +125 mL of milk must have a protein rating of $\geq 20$ <br> (B.01.305) | *g protein/serving (B.01.300) |
| b) "excellent source of" "very high" <br> "very high in" | * protein rating $\geq 40$ | * g protein/serving (B.01.300) |

## 4. FAT, FATTY ACDDS AND CHOLESTEROL

Fat and related substances follow protein in the nutrition labelling format. Fats and fatty acids should be expressed in grams and cholesterol in milligrams per serving of stated size.

The content of fats and fatty acids should be rounded to the nearest whole number for quantities of 10 g or more, and to the nearest tenth of a gram for quantities less than 10 g . Cholesterol should be rounded to the nearest milligram (i.e. 0.4 mg cholesterol would be declared as $0 \mathrm{mg}, 0.6 \mathrm{mg}$ cholesterol would be declared as 1 mg ). If no fat or fat components are present, their absence should be indicated by a zero.

Polyunsaturates, as defined by the Regulations, refer only to the cis-methylene interrupted polyunsaturated fatty acids, and monounsaturates refer only to cis-monounsaturated fatty acids (B.01.303). Fatty acids with the trans configuration are not included in this declaration.

If a claim is made for one of the following fat components namely polyunsaturates, monounsaturates, saturates or cholesterol, all four components plus total fat must be declared (B.01.303). If linoleic acid is declared, the above four components plus total fat must be declared (B.01.306). Statements or claims regarding specifically named fatty acids, other than linoleic acid, or of groups of fatty acids, e.g. omega-3-fatty acids, are not permitted.

The mandatory percent fat declaration on dairy products does not trigger a fat declaration in grams.
The order of declaration of fat, fatty acids and cholesterol should be as follows:
$\left.\begin{array}{||cl||}\hline \text { NUTRITION INFORMATION NUTRITIONNELLE } \\ \hline \text { per } \mathrm{x} \mathrm{g} \text { or mL serving } \\ \text { (x cups, items, etc.) } \\ \text { par portion de } \mathrm{x} \mathrm{g} \text { ou } \mathrm{mL} \\ \text { ( } \mathrm{x} \text { tasses, unités, etc.) }\end{array}\right]$.

## FAT CLAIMS

| CLATMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "low-fat" <br> "low in fat" <br> "light in fat". <br> "lite in fat" <br> Fat claims are not permitted for cheese products [B.08.032(2)] | $\begin{aligned} & * \leq 3 \mathrm{~g} \mathrm{fat} / \text { serving } \\ & \text { and } \\ & * \leq 15 \mathrm{~g} \text { fat } / 100 \mathrm{~g} \text { of dry matter } \\ & \text { (B. } 01.309 \text { ) } \end{aligned}$ | * g fat/serving (B.01.300) |
| b) "(\% or fraction) less fat than (naming reference food)" <br> "lower in fat than..." <br> "reduced in fat" | compared to the reference food it must be: <br> $* \geq 25 \%$ reduced in fat; <br> and <br> * have a significant absolute reduction in fat; <br> and <br> * have no increase in energy compared to the reference food | * g fat/serving (B.01.300) <br> and <br> * (the $\%$ or fraction or number of grams) less fat than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is reduced in fat <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |
| c) "fat-free" | $* \leq 0.1 \mathrm{~g} \mathrm{fat} / 100 \mathrm{~g}$ of food | *g fat/serving (B.01.300) |
| d) "light" <br> "lite" <br> "light (naming the common or brand name)" <br> "lite (naming the common or brand name)" | In general, these claims cannot be used alone, without further qualification. <br> The food must meet the meet composition requirements of: <br> * a low-fat food as described in <br> a) above; <br> or <br> * a food containing less fat than the reference food as in b) above; <br> or <br> * a fat-free food as described in <br> c) above | Must meet corresponding label and/or advertisement requirements of $a$ ), b), or c) EXCEPT in an advertisement these claims may be used alone provided that: <br> * all supporting information is on the label <br> and <br> * no other nutrition statement or claim is made in the advertisement. |


| CLAIMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD <br> REQUIREMENTS |
| :--- | :--- | :--- |
| e) "lean" | * lean ground beef $[\mathrm{B} .14 .015 \mathrm{~B}]$ and <br> lean ground pork $\leq 17 \%$ fat | $* \mathrm{~g}$ fat/serving (B.01.300) |
| * other meats, poultry and fish $\leq 10 \%$ |  |  |
| fat |  |  | | The fat in both lean ground beef and |
| :--- |
| lean ground pork may be declared as |
| $\%$ fat rather than by g /serving. |

## FATTY ACID CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "low in saturated fatty acids" "low in saturates" | * $\leq 2 \mathrm{~g}$ saturated fatty acids/serving <br> and <br> * $\leq 15 \%$ of energy value from saturated fatty acids (B.01.306.1) | * total fat, polyunsaturates, monounsaturates and saturates in $\mathrm{g} /$ serving and cholesterol in mg/serving <br> (B.01.303) |
| b) "free of saturated fatty acids" <br> "free of saturates" | $\begin{aligned} & * \leq 0.1 \mathrm{~g} \text { saturated fatty acids } / 100 \mathrm{~g} \\ & \text { (B.01.306.1) } \end{aligned}$ | same as above (B.01.303) |
| c) "source of" or "contains polyunsaturates" | $* \geq 2 \mathrm{~g}$ polyunsaturates/serving | same as above (B.01.303) |
| d) "source of linoleic acid "contains linoleic acid" <br> any mention or claim about linoleic acid | $* \geq 2 \mathrm{~g}$ linoleic acid/serving | * total fat, polyunsaturates, linoleic acid, monounsaturates and saturates in $\mathrm{g} /$ serving and cholesterol in $\mathrm{mg} /$ serving <br> [B.01.306(2)] |
| e) any claim about other fatty acids or groups of fatty acids | -- | prohibited [B.01.306(1)] |

## CHOLESTEROL CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "low-cholesterol" <br> "low in cholesterol" <br> "light in cholesterol" <br> "lite in cholesterol" | $* \leq 20 \mathrm{mg}$ cholesterol/ 100 g AND per serving <br> and $* \leq 15 \%$ of energy value from saturated fatty acids; <br> and $* \leq 2 \mathrm{~g}$ saturated fatty acids/serving (B.01.307) | * total fat, polyunsaturates, monounsaturates and saturates in $\mathrm{g} /$ serving and cholesterol in $\mathrm{mg} /$ serving <br> (B.01.303) |
| b) "cholesterol-free" <br> "free of cholesterol" <br> "no cholesterol" | $* \leq 3 \mathrm{mg} \text { cholesterol } / 100 \mathrm{~g}$ <br> and $* \leq 15 \%$ of energy value from saturated fatty acids; <br> and $* \leq 2 \mathrm{~g}$ saturated fatty acids/serving (B.01.308) | same as above (B.01.303) |
| c) (\% or fraction) less cholesterol than (naming the reference food) <br> "lower in cholesterol than" <br> "reduced in cholesterol" | Compared to the reference food it must be: <br> $* \geq 25 \%$ reduced in cholesterol <br> and <br> * have a significant absolute reduction in cholesterol | *total fat, polyunsaturates, monounsaturates and saturates in $\mathrm{g} /$ serving and cholesterol in $\mathrm{mg} /$ serving <br> (B.01.303) <br> and <br> * (the $\%$ or fraction or number of milligrams) less cholesterol than (naming the reference food) to be either <br> a) part of or grouped with the most prominent claim that the food is reduced in cholesterol <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |


| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| d) "light" <br> "lite" <br> "light (naming the common or brand name) ${ }^{n}$ <br> "lite (naming the common or brand name) ${ }^{n}$ | In general, these claims cannot be used alone, without further qualification. The food must meet the composition requirements of: <br> * a low-cholesterol food as described in <br> a) above <br> or <br> * a cholesterol free food as described in <br> b) above <br> or <br> * a food containing less cholesterol than the reference food as in c) above | Must meet the corresponding label and/or advertisement requirements of a), b) or c) EXCEPT in an advertisement these claims may be used alone provided that: <br> * all supporting information is on the label and * no other nutrition statement or claim is made in the advertisement. |

## 5. CARBOHYDRATE, SUGARS AND DIETARY FIBRE

Carbohydrate is the last nutrient in the core list, and is expressed in grams per serving of stated size.
The various substances included in this group are sugars, the sugar alcohols (mannitol, xylitol and sorbitol) starch and dietary fibre.

The content of carbohydrate and carbohydrate-related substances is expressed in grams per serving of stated size and is rounded to the nearest whole number for quantities of 10 g or more and to the nearest tenth of a gram for quantities less than 10 g . If no carbohydrate is present its absence should be indicated by a zero. The declaration of one carbohydrate component does not trigger the declaration of any of the others.

Aspartame, an artifical sweetening agent, must be declared on the front panel (see Food and Drug Regulations B.01.014 and B.01.015 for labelling regulations) and in the nutrition labelling format, preferably following dietary fibre. No objection would be taken, however, to declaring aspartame after protein. The amounts of aspartame are expressed in milligrams.

The terms "sweet" and "sweetened" (e.g. sweet corn, sweetened applesauce, etc.), when unqualified, do not trigger a sugar declaration.

| NUTRITION INFORMATION NUTRITIONNELLE |  |
| :---: | :---: |
| per x g or mL ( x cups, items, par portion de x g ( $x$ tasses, unités, |  |
| Energy/Énergie | $\begin{aligned} & \text { x Cal } \\ & \text { x kJ } \end{aligned}$ |
| Protein/Protéines | x g |
| Fat/Matières grasses | X g |
| Carbohydrate/Glucides | $\times \mathrm{g}$ |
| sugars/sucres | x g |
| mannitol | x g |
| xylitol | x g |
| sorbitol | x g |
| starch/amidon | x g |
| dietary fibre/fibres alimentaires | x g |
| Aspartame | x mg |

## CARBOHYDRATE AND SUGAR CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "carbohydrate-reduced" | "Only for foods for special dietary use, and must have: <br> $* \geq 25 \%$ of the calories from its carbohydrate content if it were not carbohydrate-reduced; and when ready to serve provides <br> * $\leq 50 \%$ available carbohydrate and no more Calories than would be provided if it were not carbohydratereduced. <br> (B.24.004) | * core list (energy, protein, fat carbohydrate), mannitol, sorbitol, xylitol if used; and polydextrose, if used, and a statement of its possible laxative effect. <br> The advertisement AND the label must state: <br> * recommended for "carbohydratereduced diets" <br> The label must state: <br> * "carbohydrate-reduced" in close proximity to and of the same type size as common name. <br> (B.24.009) |
| b) "low-sugar" <br> "low in sugar" <br> "light in sugar" <br> "lite in sugar" | $* \leq 2 \mathrm{~g}$ sugars/serving of stated size <br> and <br> $\leq 10 \%$ sugars on a dry basis | * g sugars/serving (B.01.300) |
| c) ${ }^{n}$ (\% or fraction) less sugar than (naming reference food)" <br> "reduced in sugar" <br> "lower in sugar than..." <br> "lightly sweetened" | Compared to the reference food it must be: <br> $* \geq 25 \%$ reduced in sugars; <br> and <br> * have a significant absolute reduction in sugar; <br> and <br> * have no increase in energy | * g sugars/serving (B.01.300) <br> and <br> * (the $\%$ or fraction or number of grams) less sugar than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is reduced in sugar <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |


| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| d) "sugar-free" <br> "sugarless" <br> "no sugar" <br> "sweet without sugar" | only for foods for special dietary use <br> * is a carbohydrate-reduced food that, when ready to serve, contains: <br> * $\leq 0.25 \%$ available carbohydrate; <br> and <br> * $\leq 1 \mathrm{Cal} / 100 \mathrm{~g}$ or 100 mL (except chewing gum) (B.24.005) | * core list (energy, protein, fat, carbohydrate), sugars; mannitol, sorbitol, xylitol, if used; and polydextrose, if used, with a statement of its possible laxative effect; <br> The advertisement AND the label must state: <br> * recommended for "carbohydratereduced diets" <br> The label must state: <br> * "sugar-free" or "sugarless" on the principal display panel in close proximity to and in the same type size as the common name. <br> (B.24.010) |
| e) "light" <br> "lite" <br> "light (naming the food or brand)" <br> "lite (naming the food or brand)" | In general, these claims cannot be used alone, without further qualification. The food must meet the composition requirements of: <br> * a carbohydrate-reduced food as described in a) above <br> or <br> *a low-sugar food as described in <br> b) above <br> or <br> *a food containing less sugar than the reference food as in c) above or * a sugar-free food as described in <br> d) above | Must meet the corresponding label and/or advertisement requirements of a), b), c), or d) EXCEPT in an advertisement these claims may be used alone provided that: <br> * all supporting information is on the label; <br> and <br> * no other nutrition statement or claim is made in the advertisement. |
| f) "no sugar added" <br> "unsweetened" | means no added sucrose (B.18.008), molasses, fruit juice, fructose, glucose or other monosaccharides or disaccharides | * sugars (e.g., all mono and disaccharides) in g/serving (B.01.300) |
| g) "no added sugar, sweetened with (naming the sweetener)" <br> "sweetened with" | contains no added sucrose but may contain honey, molasses, fruit juice, fructose, glucose or other monosaccharides or disaccharides as sweetening agents. | same as above (B.01.300) <br> and <br> * the claim must be accompanied by, in close proximity and in equal prominence to, a declaration of the replacement sweetener used. |
| h) "sweet" (unqualified) "sweetened" (unqualified) heavy syrup | -- | administrative exemption from sugars declaration |

## DIETARY FIBRE

Dietary fibre is the endogenous component of plant material in the diet which is resistant to digestion by humans.

Novel fibre is a food that has been manufactured to be a source of dietary fibre, and which has not been traditionally or extensively used for human consumption. The properties of such fibres may be modified by such processes as or ation and grinding, and may be highly concentrated from their plant sources. The safety and efficacy . Iovel fibre sources must be established before they can be recognized as sources of dietary fibre.

Once proven safe for use by humans, novel fibres may be used as food ingredients. However until their efficacy has been established no fibre claims may be made for them. Dietary fibre analyses should be carried out by a method deemed appropriate by Health and Welfare Canada. Manufacturers considering the use of novel fibre sources and wishing further guidance on their use are acvised to contact the Health Protection Branch of Health and Welfare Canada.

When fibre claims are made, the dietary fibre content of a food is to be declared in grams per serving. Claims may be made both for foods that are traditional fibre sources such as fruits, vegetables, legumes, nuts, cereal grains, etc., as well as for such proven novel fibre sources as wheat bran, oat bran, soy cotyledons, corn bran, and certain types of pea hull fibre and sugar beet pulp. In general, no claim should be made concerning the fibre content of a food, unless the food contains at least 2 grams of dietary fibre per serving. If specific fibre source ingredients are mentioned (other than in the list of ingredients), each fibre source for which a claim is made must provide at least 2 grams of dietary fibre per serving. If a food contains an unproven novel fibre source, the amount of fibre contributed by this ingredient must not be included in the declaration of the total dietary fibre content.

The terms "good" and "excellent" should not be used to describe the amount of dietary fibre contained in a food since they imply a judgement as to the nature and value of the fibre in addition to quantity.

Drug claims such as laxative effect, prevents constipation, reduces blood lipids and/or cholesterol, affects blood glucose levels, reduces weight, controls appetite, etc. are not permitted.

Quantitive comparisons of the fibre content of foods are considered to be misleading unless the fibres are derived from the same plant sources and parts, and are in similar physical forms. The fibre should be incorporated into compositionally similar foods, or be shown by the manufacturer to have similar physiological actions.

## DIETARY FIBRE CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "contains a moderate amount of (naming the fibre source, e.g., oat bran)" <br> "source of" <br> "made with (naming the fibre source, e.g., oat bran) <br> (naming the fibre source) (naming the food) (e.g., oat bran bread, bran muffins) | $* \geq 2 \mathrm{~g}$ of dietary fibre/serving when a specific fibre source is not mentioned <br> and/or <br> * $\geq 2 \mathrm{~g}$ of each named dietary fibre/serving when a specific fibre source is mentioned. | * dietary fibre in g/serving (B.01.300) |
| b) "high source" "high in" | $* \geq 4 \mathrm{~g}$ dietary fibre/ serving | * dietary fibre in g/serving (B.01.300) |
| c) "very high source of" "very high in" <br> "fibre rich" | $* \geq 6 \mathrm{~g}$ dietary fibre/ serving | * dietary fibre in g/serving (B.01.300) |
| d) "promotes laxation" "promotes regularity" | * $\geq 7 \mathrm{~g}$ dietary fibre in a Reasonable Daily Intake (see Section 10 of this Handbook), from coarse wheat bran | * dietary fibre in g/serving (B.01.300) |
| e) "(naming the $\%$ or fraction) more fibre/bran than..." | $* \geq 2 \mathrm{~g}$ dietary fibre/serving <br> and <br> Compared to the reference food it must be: <br> $* \geq 25 \%$ increased in fibre <br> * a significant absolute difference in fibre. | *dietary fibre in g/serving <br> (B.01.300) <br> and <br> * (the $\%$ or fraction or number of grams) more fibre than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is higher in fibre <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |
| f) "good" or "excellent fibre source" | -- | not permitted |

## 6. SODIUM/SALT, AND POTASSIUM

Sodium and potassium follow the core list in the nutrition labelling format. A declaration of either sodium or potassium triggers a declaration of BOTH nutrients in milligrams/serving of stated size (B.01.302), and the quantities should be rounded to the nearest whole number.

A claim for the salt content of a food is regarded as a claim for the sodium content of the food (B.01.302). The term "salted", when unqualified, (e.g. salted crackers) does not require a salt/sodium declaration.

## SALT/SODIUM CLAIMS

| CLAIMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "low-sodium" "low salt" "low in sodium" "low in salt" "light in sodium" "lite in sodium" "light in salt" "lite in salt" | Only for foods for special dietary use <br> * $\leq 50 \%$ of the sodium that would be present if the food were not a lowsodium food; <br> and <br> $* \leq 40 \mathrm{mg}$ sodium $/ 100 \mathrm{~g}$ (except <br> $\leq 50 \mathrm{mg} / 100 \mathrm{~g}$ for cheddar cheese, and <br> $\leq 80 \mathrm{mg} / 100 \mathrm{~g}$ for meat, poultry and fish); <br> and <br> * except for salt substitutes, contains no added salts of sodium (B.24.008) | * core list (energy, protein, fat, carbohydrate), mannitol, sorbitol, xylitol, if used, in g/serving of stated size and <br> * sodium and potassium in $\mathrm{mg} /$ serving <br> The advertisement and the label must state: <br> * "for sodium-restricted diets" <br> The label must state: <br> * "low-sodium" on principal display panel in close proximity to the common name and in the same type size <br> (B.24.013) |
| b) "(\% or fraction) less sodium/salt than (naming reference food) ${ }^{n}$ <br> "lightly salted" | Compared to the reference food it must be: <br> $* \geq 25 \%$ reduced in sodium/salt; <br> and <br> * have a significant absolute reduction in sodium/salt, compared to the reference food | * sodium and potassium in g/serving <br> (B.01.302) <br> and <br> * (\% or fraction or number) less sodium/salt than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is reduced in sodium/salt <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |


| CLAIMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| c) "sodium free" <br> "salt free" | $* \leq 5 \mathrm{mg}$ sodium $/ 100 \mathrm{~g}$ of food | * sodium and potassium in mg/serving (B.01.302) |
| d) "light" <br> "lite" <br> "light (naming the food or brand)" <br> "lite (naming the food or brand)" | In general, these claims cannot be used alone, without further qualification. <br> The food must meet composition requirements of: <br> * a low-sodium food as described in <br> a) above <br> or <br> * a food containing less salt than the reference food as in b) above. <br> or <br> * a sodium-free food as described in <br> c) above | Must meet the corresponding label and/or advertisement requirements of a), b) or c) EXCEPT in an advertisement these claims may be used alone provided that: <br> * all supporting information is on the label <br> and <br> * no other nutrition statement or claim is made in the advertisement. |
| e) "no added salt" <br> "unsalted" | no salt ( NaCl ) or other salts of sodium have been added directly to the food; and no ingredient or component contributes a significant amount of sodium to the food | * sodium and potassium in $\mathrm{mg} /$ serving |
| f) "salted" (unqualified) <br> "with added salt" <br> "extra salted" <br> "double salted" | -- | administrative exemption from sodium and potassium declaration. |

## POTASSIUM CLAIMS

| CLAIMS | COMPOSITION <br> REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) "source of" "contains" | $\geq 200 \mathrm{mg} /$ serving | * sodium and potassium in mg/serving (B.01.302) |
| b) "good source of" "high in" | $\geq 350 \mathrm{mg} /$ serving | * sodium and potassium in mg/serving (B.01.302) |
| c) "excellent source of" | $\geq 550 \mathrm{mg} /$ serving | * sodium and potassium in mg/serving (B.01.302) |

## 7. VITAMINS AND MINERAL NUTRIENIS

## A. DECLARATIONS AND TERMINOLOGY

Declarations of vitamins and mineral nutrients are based on the combined total of both the naturally occurring and added nutrient content of a food. These declarations follow sodium and potassium in the nutrition labelling format.

Vitamin and mineral nutrients for which Recommended Daily Intakes have been established are expressed as a percentage of the Recommended Daily Intake. If a vitamin or mineral nutrient is present in a food in an amount less than $5 \%$ of the Recommended Daily Intake, this percentage may be declared, but with no claims related to it. For nutrients present in quantities greater than $100 \%$ of the Recommended Daily Intake, the actual percentage present is also to be declared (i.e. $117 \%$ ). No claims can be made for vitamins and mineral nutrients with no established Recommended Daily Intakes. When they are added to foods, they are to be declared by name and the amounts stated in mg/serving (D.01.003, D.01.004, D.02.002, D.02.003).*

The term Recommended Daily Intake, although often abbreviated to RDI in conversation, must be written in full on labels and advertisements.

The nomenclature and order of listing the vitamins and mineral nutrients should be as follows: (D.01.002, D.02.001):

| PERCENTAGE OF RECOMMENDED DALLY INTAKE POURCENTAGE DE L'APPORT QUOTIDIEN RECOMMANDE |  |
| :---: | :---: |
| Vitamin A/Vitamine A | $\times \%$ |
| Vitamin D/Vitamine D | x \% |
| Vitamin E/Vitamine E | x\% |
| Vitamin C/Vitamine C | $\times \%$ |
| Thiamine or/ou Vitamin $\mathrm{B}_{1} /$ Vitamine $\mathrm{B}_{1}$ | $\times \%$ |
| Riboflavin/Riboflavine or/ou |  |
| Vitamin $\mathrm{B}_{2} /$ Vitamine $\mathrm{B}_{2}$ | x\% |
| Niacin/Niacine | $\times \%$ |
| Vitamin $\mathrm{B}_{6} /$ Vitamine $\mathrm{B}_{6}$ | $\times \%$ |
| Folacin/Folacine | $\times \%$ |
| Vitamin $\mathrm{B}_{12} /$ Vitamine $\mathrm{B}_{12}$ | $\times \%$ |
| Pantothenic acid/Pantothenate or/ou |  |
| Acide pantothénique/Pantothénate | $\times \%$ |
| Calcium | $\times \%$ |
| Phosphorus/Phosphore | x \% |
| Magnesium/Magnésium | $\times \%$ |
| Iron/Fer | x \% |
| Zinc | x \% |
| Iodide/Lode | $\times$ \% |
| Others/(named) | x mg |

a Some examples of "others" are:
vitamins: vitamin K, biotin
mineral nutrients: chloride, copper, fluoride, manganese

## B. RECOMMENDED DAILY INTAKES

The following table of Recommended Daily Intakes for vitamins and mineral nutrients is a reference standard developed for use in the nutrition labelling of foods in Canada. It is based on the Recommended Nutrient Intakes for Canadians, and represents the highest recommended intake of each nutrient for each age/sex group, omitting supplemental needs for pregnancy and lactation.

Note: Recommended Daily Intakes are given for two different age groups. When using the following table be sure to use the appropriate column.

| Nutrient | Units | Persons <br> 2 years of age or older | Infants and children less than 2 years of age |
| :---: | :---: | :---: | :---: |
| vitamin A | $\mathrm{RE}^{\text {a }}$ | 1000 | 400 |
| vitamin D | $\mathrm{mcg}^{\text {b }}$ | 5 | 10 |
| vitamin E | $\mathrm{mg}^{\text {c }}$ | 10 | 3 |
| vitamin C | mg | 60 | 20 |
| thiamine, vitamin $\mathrm{B}_{1}$ | mg | 1.3 | 0.45 |
| riboflavin, vitamin $\mathrm{B}_{2}$ | mg | 1.6 | 0.55 |
| niacin | NE ${ }^{\text {d }}$ | 23 | 8 |
| vitamin $\mathrm{B}_{6}$ | mg | 1.8 | 0.7 |
| folacin | mcg | 220 | 65 |
| vitamin $\mathrm{B}_{12}$ | mcg | 2 | 0.3 |
| pantothenic acid or pantothenate | mg | 7 | 2 |
| calcium | mg | 1100 | 500 |
| phosphorus | mg | 1100 | 500 |
| magnesium | mg | 250 | 55 |
| iron | mg | 14 | 7 |
| zinc | mg | 9 | 4 |
| iodide | mcg | 160 | 55 |

$$
\begin{array}{lll}
: \mathrm{RE}=\text { retinol equivalents }, & \mathrm{mcg}=\mu \mathrm{g}=\text { micrograms }, \\
\mathrm{mg}=\text { milligrams }, & \mathrm{d}, & \mathrm{NE}=\text { niacin equivalents }
\end{array}
$$

Example 7.1: Calculating the percentage of the Recommended Daily Intake of 4 nutrients:
125 mL of condensed tomato soup contains:
72 RE vitamin A, $70 \mathrm{mg} \cdot$ vitamin $\mathrm{C}, \quad 0.09 \mathrm{mg}$ thiamine, $\quad 15 \mathrm{mcg}$ folacin
To express these quantities as a percentage of the Recommended Daily Intake for adults, divide each nutrient by the Recommended Daily Intake for that nutrient from the above table and multiply by 100 :

| vitamin A | $72 / 1000 \times 100$ | $=7 \%$ Recommended Daily Intake |
| :--- | :--- | :--- | :--- |
| vitamin C | $70 / 60 \times 100$ | $=117 \%$ Recommended Daily Intake |
| thiamine | $.09 / 1.3 \times 100=$ | $7 \%$ Recommended Daily Intake |
| folacin | $15 / 220 \times 100$ | $=7 \%$ Recommended Daily Intake |

## C. VITAMIN CALCULATIONS

## i) Vitamin A Calculations

The units traditionally used to express the Vitamin A content of a food were International Units (IU). Vitamin A is now measured in retinol equivalents (RE). Vitamin A activity in a food is provided by both retinol (primarily in animal sources e.g. Vitamin A palmitate) and beta carotene (primarily in plant sources). International Units (IU) of Vitamin A can be converted to retinol equivalents (RE) using the following formula:

$$
\mathrm{RE}=\frac{(\mathrm{IU} \text { retinol })}{3.33}+\frac{(\mathrm{IU} \text { beta-carotene })}{10}
$$

## Example 7.2: Calculating the \% of the Recommended Daily Intake of Vitamin A.

A container of partly skimmed milk contains 150 IU of vitamin $\mathrm{A} / 100 \mathrm{~mL}$ (from Vitamin A palmitate).
a) Convert IU's to RE (retinol equivalents)
$150 \mathrm{IU}=45 \mathrm{RE} / 100 \mathrm{~mL}$ 3.33 IU
b) Calculate \% of Recommended Daily Intake of Vitamin A for adults, (which is 1000 RE )

$$
\frac{45 \mathrm{RE}}{1000 \mathrm{RE}} \times 100=4.5 \%
$$

c) Calculate \% of Recommended Daily Intake for 250 mL
$4.5 \% \times \frac{250 \mathrm{~mL}}{100 \mathrm{~mL}}=11.25 \%$ (rounded to the nearest whole number $=11 \%$ )

## i) Vitamin A Calculations (cont'd)

The following table contains calculated equivalents of retinol (IU), beta carotene (IU) and retinol equivalents (RE) (e.g. 50 IU retinol $=150 \mathrm{IU}$ beta carotene $=15 \mathrm{RE}$ ) along with the calculated \% Recommended Daily Intakes of Vitamin A for adults and children.

| CONVERSION TABLE FOR VITAMIN A |  |  |  |
| :--- | :--- | :--- | :--- | :--- |$|$| \% RDI |
| :--- |
| IU <br> (retinol) |
| IU (beta- <br> carotene) |
| RE |
| 50 |
| 100 |

a Recommended Daily Intake of Vitamin A for persons of 2 years of age and older is 1000 RE ;
b Recommended Daily Intake of Vitamin A for persons less than 2 years of age is 400 RE.

## ii) Vitamin D Calculations

Vitamin D, until recently, was expressed in International Units (IU) but is now measured in micrograms (mcg). Vitamin D is declared on labels as a percentage of the Recommended Daily Intake.

To convert IU of Vitamin D to mcg simply divide by 40 :
1 mcg of cholecalciferol $\left(\right.$ Vitamin $\left.D_{2}\right)$ or ergocalciferol $\left(\right.$ Vitamin $\left.D_{3}\right)=40$ IU vitamin $D$

## Example 7.3: Calculating the \% of the Recommended Daily Intake of Vitamin D

A container of partly skimmed milk contains 36 IU of vitamin D/ 100 mL .
a) Convert IU's to mcg
$\frac{36 \mathrm{IU}}{40}=0.9 \mathrm{mcg}$ vitamin $\mathrm{D} / 100 \mathrm{~mL}$
b) Calculate \% of Recommended Daily Intake of Vitamin D for adults, (which is 5 mcg )

$$
\frac{0.9}{5} \mathrm{mcg} \times 100=18 \%
$$

c) Calculate \% of Recommended Daily Intake for a 250 mL serving

$$
18 \% \times \frac{250 \mathrm{~mL}}{100 \mathrm{~mL}}=45 \%
$$

The above conversions for Vitamins A and D would appear as follows on a label:

| Percent of Recommended Daily Intake <br> per 250 mL serving (1 cup) |
| :---: |
| vitamin A $11 \%$ |
| vitamin D $45 \%$ |

ii) Vitamin D Calculations (cont'd)

The following table contains IU of Vitamin D converted to mcg, along with a calculation of the \% of Recommended Daily Intake of Vitamin D for adults and children.

| CONVERSION TABLE FOR VITAMIN D |  |  |  |
| :--- | :--- | :---: | :---: |
| IU | mcg | $\%$ RDI $(\geq 2$ <br> years of age $)^{2}$ | $\%$ RDI $(<2$ <br> years of age) $)^{b}$ |
| 4 | 0.10 | 2 | 1 |
| 10 | 0.25 | 5 | 2.5 |
| 20 | 0.50 | 10 | 5 |
| 30 | 0.75 | 15 | 7.5 |
| 40 | 1.00 | 20 | 10 |
| 50 | 1.25 | 25 | 12.5 |
| 60 | 1.50 | 30 | 15 |
| 70 | 1.75 | 35 | 17.5 |
| 80 | 2.00 | 40 | 20 |
| 90 | 2.25 | 45 | 22.5 |
| 100 | 2.50 | 50 | 25 |

2 Recommended Daily Intake of Vitamin D for persons of 2 years of age or older is 5 mcg ;
b Recommended Daily Intake of Vitamin D for persons less than 2 years of age is 10 mcg .

## iii) Vitamin E Calculations:

Vitamin E is now expressed in milligrams (mg) rather than in International Units (IU). The same conversion factor is used whether the vitamin E activity is from is $d$-alpha tocopherol (naturally occurring) or from dl-alpha tocopherol (synthetic). The conversion formula is as follows:

$$
1 \text { IU Vitamin } \mathrm{E}=0.67 \mathrm{mg} d \text {-alpha tocopherol }
$$

The following table contains IU of Vitamin E converted to mg , along with a calculation of the \% of the Recommended Daily Intake of Vitamin E for adults and children.

| CONVERSION TABLE FOR VITAMIN E: |  |  |  |
| :--- | :--- | :--- | :--- |
| IU | mg | $\%$ RDI $(\geq 2$ <br> years of <br> age) | $\%$ RDI $(<2$ <br> years of <br> age) $)^{\mathrm{b}}$ |
| 0.25 | .17 | 2 | 5.6 |
| 0.5 | .34 | 3 | 11.2 |
| 1.0 | .67 | 7 | 22.3 |
| 1.5 | 1.0 | 10 | 33.5 |
| 2.0 | 1.3 | 13 | 44.7 |
| 2.5 | 1.7 | 17 | 55.8 |
| 3.0 | 2.0 | 20 | 67.0 |
| 3.5 | 2.3 | 23 | 78.2 |
| 4.0 | 2.7 | 27 | 89.3 |
| 4.5 | 3.0 | 30 | 100.5 |
| 5.0 | 3.4 | 34 | 111.7 |
| 5.5 | 3.7 | 37 | 122.8 |
| 6.0 | 4.0 | 40 | 134.0 |
| 6.5 | 4.4 | 44 | 145.2 |
| 7.0 | 4.7 | 47 | 156.3 |
| 7.5 | 5.0 | 50 | 167.5 |

[^0]${ }^{b}$ Recommended Daily Intake of Vitamin $E$ for persons less than 2 years of age is 3 mg .

## iv) Niacin Calculations

Although previously expressed in milligrams, niacin is now determined in niacin equivalents (NE). The conversion formula is as follows:

Niacin equivalents $(\mathrm{NE})=\mathrm{mg}$ niacin and/or nicotinic acid + mg tryptophan 60

The content of tryptophan in a food can be estimated if the protein content of the food is known. Tryptophan constitutes $1.5 \%$ of egg protein, $1.3 \%$ of protein from milk, meat, poultry or fish, and $1.1 \%$ of the protein from mixed and other sources.

Example 7.4: Calculating the \% of the Recommended Daily Intake of niacin in a mixed protein source.

A 60 g serving of food contains 4.26 mg niacin and 7.5 g protein from a mixed source:
a) $\quad \mathrm{NE}$ from niacin alone $=4.26 \mathrm{NE}$
b) calculate the $\%$ tryptophan (which is $1.1 \%$ of the protein)
$1.1 \% \times 7.5 \mathrm{~g}$ protein $=0.082 \mathrm{~g}$ tryptophan $=82 \mathrm{mg}$
c) using conversion formula above, divide mg of tryptophan by 60
$82 \mathrm{mg}=1.36 \mathrm{NE}$
60 mg
d) add niacin equivalents from the niacin and the tryptophan

$$
4.26 \mathrm{NE}+1.36 \mathrm{NE}=5.62 \mathrm{NE}
$$

e) calculate the \% of the Recommended Daily Intake of niacin (for adults which is 23 NE )
5. $62 \mathrm{NE} \times 100 \%=24 \%$

23 NE

## v) VITAMIN AND MINERAL NUTRIENT CLAIMS

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| a) any vitamin or mineral nutrient claim <br> "contains" <br> "source of" <br> "contains 8 essential nutrients" | * Claims may be made only for vitamins or mineral nutrients for which RDI's' have been established [D.01.004(1)(a)], [D.02.002(1)(a)]; <br> and <br> * which provide $\geq 5 \%$ of RDI <br> [D.01.004(1)(b)], [D.02.002(1)(b)] | * claimed vitamin(s) as \% of RDI per serving [D.01.004(1)(c)] <br> and <br> * claimed mineral nutrient(s) as \% RDI per serving [D.02.002(1)(c)] |
| b) "good source of" "high in" | $* \geq 15 \%$ RDI, except $\geq 30 \%$ RDI for vitamin C | same as above: <br> [D.01.004(1)(c)], [D.02.002(1)(c)] |
| c) "excellent source of" "very high in" "rich in" most other qualifying terms | $* \geq 25 \%$ RDI, except $\geq 50 \%$ RDI for vitamin C; | same as above: <br> [D.01.004(1)(c)], [D.02.002(1)(c)] |
| d) "added vitamins" <br> "fortified/enriched with" <br> "vitaminized with" | Permitted additions of vitamins and mineral nutrients are listed in D. 03.002 (see Page 48 of this Handbook) <br> Minimum and maximum amounts to be added are regulated (D.01.009, D.01.010, D.01.011, D.02.009) | * claimed vitamin(s) as a $\%$ of RDI per serving [D.01.004(1)(c)] <br> * claimed mineral nutrient(s) as \% of RDI per serving [D.02.002(1)(c)] <br> or <br> $\mathrm{mg} /$ serving if no RDI exists. <br> [D.01.005(b)], [D.02.003(b)] |

* Recommended Daily Intake (RDI) has been abbreviated for convenience in these tables, but must be written in full on labels and advertisements.

| CLAIMS | COMPOSITION REQUIREMENTS | LABEL AND/OR AD REQUIREMENTS |
| :---: | :---: | :---: |
| e) " (\% or fraction) more (named vitamin or mineral nutrient) than (naming reference food)" <br> "higher in (named vitamin and/or mineral nutrients) than..." | Compared to the reference food it must be: <br> $* \geq 25 \%$ increased in the claimed vitamin or mineral nutrient <br> and <br> * have a significant absolute difference in the vitamin or mineral nutrient content | Same as above: <br> [D.01.004(1)(c)], [D.02.002(1)(c)] <br> and <br> * (the \% of fraction or number) more vitamin or mineral nutrient than (naming the reference food) to be either: <br> a) part of or grouped with the most prominent claim that the food is higher in a vitamin or mineral nutrients <br> or <br> b) clearly linked to this statement: <br> i) on the principal display panel when the claim is made on the label; <br> and <br> ii) in the advertisement when the claim is made in the advertisement. |
| f) "US RDA's <br> (Recommended Daily Allowances) | -- | not permitted in Canada |

## MINIMUM AMOUNTS OF VITAMINS AND MINERAL NUTRIENTS REQUIRED PER SERVING FOR CLAIMS

## (ADULTS)

| CLAIMS FOR PERSONS 2 YEARS OF AGE OR OLDER |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | "a source of" <br> "contains" <br> ( $\mathbf{5 \%} \% \mathrm{RDI}$ ) | "a good source of" "high in" ( $\mathbf{1 5 \%}$ RDI except for vitamin $C^{*}$ ) |  | "excellent source" <br> "very high in" <br> ( $25 \%$ RDI except <br> for vitamin $C^{b}$ ) |  |
| VITAMINS |  |  |  |  |  |
| vitamin A | 50 RE | 150 | RE | 250 | RE |
| vitamin D | . 25 mcg | . 75 | mcg | 1.25 | mcg |
| vitamin E | 0.5 mg | 1.5 | mg |  | mg |
| vitamin C | 3.0 mg |  | mg |  | mg |
| thiamine (vitamin $\mathrm{B}_{1}$ ) | . 07 mg | . 20 | mg | . 33 | mg |
| riboflavin (vitamin $\mathrm{B}_{2}$ ) | . 08 mg | . 24 | mg | 0.4 | mg |
| niacin | 1.15 NE | 3.45 | NE | 5.75 | NE |
| vitamin $\mathrm{B}_{6}$ | . 09 mg | 27 | mg | . 45 |  |
| folacin | 11 mcg | 33 |  | 55 |  |
| vitamin $\mathrm{B}_{12}$ | 0.1 mcg |  |  | 0.5 |  |
| pantothenic acid or pantothenate | . 35 mg | 1.05 |  | 1.75 |  |
| MINERAL NUTRIENTS |  |  |  |  |  |
| calcium | 55 mg | 165 | mg | 275 | mg |
| phosphorus | 55 mg | 165 | mg | 275 | mg |
| magnesium | 12.5 mg |  | 'mg | 62.5 | mg |
| iron | 0.7 mg |  | mg | 3.5 | mg |
| zinc | .45 mg | 1.35 |  | 2.25 |  |
| iodide | 8.0 mcg | 24 | mcg | 40 | mcg |

[^1]
## MINIMUM AMOUNTS OF VITAMINS AND MINERAL NUTRIENTS REQUIRED PER SERVING FOR CLAIMS

(CHILDREN UNDER TWO)

|  | "a source of" "contains" <br> $\geq 5 \% \mathrm{RDI})$ | "a good source of" "high in" <br> $(\geq 15 \% \mathrm{RDI}$ except for vitamin $\mathrm{C}^{2}$ ) | "excellent source" <br> "very high in" <br> $\geq 25 \%$ RDI except <br> for vitamin $C^{b}$ ) |
| :---: | :---: | :---: | :---: |
| VITAMINS |  |  |  |
| vitamin A | 20 RE | 60 RE | 100 RE |
| vitamin D | 0.5 mcg | 1.5 mcg | 2.5 mcg |
| vitamin E | . 15 mg | . 45 mg | .75 mg |
| vitamin C | 1.0 mg | 6.0 mg | 10 mg |
| thiamine (vitamin $\mathrm{B}_{1}$ ) | . 02 mg | . 08 mg | . 11 mg |
| riboflavin (vitamin $B_{2}$ ) | . 03 mg | . 07 mg | 0.14 mg |
| niacin | 0.4 NE | 1.2 NE | 2.0 NE |
| vitamin $\mathrm{B}_{6}$ | . 04 mg | . 11 mg | . 18 mg |
| folacin | 3.3 mcg | 9.8 mcg | 16.3 mcg |
| vitamin $\mathrm{B}_{12}$ | . 02 mcg | . 05 mcg | . 08 mcg |
| pantothenic acid or pantothenate | 0.1 mg | 0.3 mg | .5 mg |
| MINERAL NUTRIENTS |  |  |  |
| calcium | 25 mg | 75 mg | 125 mg |
| phosphorus | 25 mg | 75 mg | 125 mg |
| magnesium | 2.8 mg | 8.3 mg | 13.8 mg |
| iron | . 35 mg | 1.1 mg | 1.8 mg |
| zinc | 0.2 mg | 0.6 mg | 1.0 mg |
| iodide | 2.8 mcg | 8.3 mcg | 13.8 mcg |

To claim that a food is a "good source" or "high in" vitamin C, it must provide $\geq 30 \%$ RDI;
to claim that a food is a "very high" or an "excellent source" of vitamin C, it must provide $\geq 50 \%$ RDI.

## 8. BIOLOGICAL ROLE OF NUTRIENTS

## GENERAL CLAIMS

The following claims, which are generally recognized functions of nutrients (B.01.311, D.01.006, D.02.004), are permissible:
(name of the nutrient) is a "factor in the maintenance of good health", or (name of the nutrient) is a "factor in normal growth and development"...

## ACCEPTABLE SPECIFIC CLAIMS FOR THE BIOLOGICAL ROLE OF NUTRIENTS

| PROTEIN | - helps build and repair body tissues <br> - helps build antibodies |
| :--- | :--- |
| FAT | - supplies energy <br> - aids in the absorption of fat soluble vitamins |
| CARBOHYDRATE | - supplies energy <br> - assists in the utilization of fats |
| VITAMIN A | - aids normal bone and tooth development <br> - aids in the development and maintenance of night vision <br> - aids in maintaining the health of the skin and membranes |
| VITAMIN D | - factor in the formation and maintenance of bones and teeth <br> - enhances calcium and phosphorus absorption and utilization |
| VITAMIN E | - protects the fat in body tissues from oxidation |
| VITAMIN C | - factor in the development and maintenance of bones, <br> cartilage, teeth and gums |
| THIAMINE | - releases energy from carbohydrate <br> (VITAMIN B1) |
| - aids normal growth |  |

## CLAIMS FOR THE BIOLOGICAL ROLE OF NUTRIENTS (cont'd)

| VITAMIN $B_{6}$ | - factor in energy metabolism and tissue formation |
| :--- | :--- |
| FOLACIN | - aids in red blood cell formation |
| VITAMIN $B_{12}$ | - aids in red blood cell formation |
| PANTOTHENIC ACID | - factor in energy metabolism and tissue formation |
| CALCIUM | - aids in the formation and maintenance of bones and teeth |
| PHOSPHORUS | - factor in formation and maintenance of bones and teeth |
| MAGNESIUM | - factor in energy metabolism tissue formation and bone |
| development |  |

## 9. SUGGESTED SERVING SIZES

The serving sizes set out in the following table are suggested for use in the declaration of nutrient content, including nutrition labelling. They are based primarily on food consumption data from the Nutrition Canada National Survey and take into account serving sizes suggested in Canada's Food Guide, current market units and consumption practices. In many cases, ranges are provided for greater flexibility.

The "typical serving sizes" are given in rounded metric units, either in grams (mass) or, in the case of liquids, in millilitres (volume). In addition, approximately equivalent household measures (metric and Canadian) or common units of food are given in parentheses. Raw and cooked values are given for a number of foods, which may be sold in either form.

An exception to these serving sizes is made in the case of a food sold in a single serving unit. In this situation, the mass or volume, as appropriate, of the single serving unit is to be used as the basis for nutrient declarations (section B.01.002A of the Food and Drug Regulations). Similarly, if a food is sold in multiple portions of a size fixed by the manufacturer (e.g., bread rolls) or in units of fixed size which are combined to form a portion (e.g., soda crackers), the total weight of an appropriate number of units should be used as a basis for declarations.

It should be emphasized that these serving sizes are intended to be suggestions only. Industry and individual manufacturers will have the flexibility to determine the serving size for a given product provided that it is reasonable, and is used in a fair and consistent manner. A reasonable serving size is considered to be an amount of food which would reasonably be consumed at one sitting by an adult. Except where permitted by the Regulations, it is considered misleading and deceptive to use more than one serving size to declare the nutrient content of a given product.

Agreement within the food industry on the serving size of a food is essential for nutrition labelling and claims to be informative, and to allow for meaningful comparisons.

## SUGGESTED SERVING SIZES FOR THE DECLARATION OF NUTRIENT CONTENT

| Column I <br> Name and Description | Serving Size | Column II <br> Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Bread, Cereals and other Grain Produts |  |  |
| Biscuits and crackers |  |  |
| Sweet biscuits or cookies | 30-40g | (3-5 cookies) |
| Soda biscuits, cream crackers | 15-25g | (4-8 crackers) |
| Crispbreads, rye crisp, melba toast, savoury crakers | 20-40g | ( $2-5$ crispbreads) |
| Breads, rolls, buns, bagels | $25-60 \mathrm{~g}$ | ( 1 or 2 slices, 1 or 2 rolls, 1 bagel, 1 English muffin, 1 hamburger bun) |
| Cakes | $80-110 \mathrm{~g}$ | ( $1 / 12$ of 23 cm diameter cake) |
| Doughnuts, pastries | 60-80 g | (1 doughnut, 1 Danish pastry) |
| Cereals, ready-to-eat | 30 g | 75-375 mL, $1 / 3$ cup - $11 / 2$ cups) |
| Cereals, oatmeal or rolled oats, dry | 30 g | $75 \mathrm{~mL}, 1 / 3$ cup, or $2 / 3-1$ cup cooked) |
| Cereals, puffed, other than presweetened | 15 g | ( $250 \mathrm{~mL}, 1 \mathrm{cup}$ ) |
| Flour, all purpose, whole wheat, cake flour | 60-140 g | ( $125-250 \mathrm{~mL}, 1 / 2-1 \mathrm{cup}$ ) |
| Muffins | $40-100 \mathrm{~g}$ | (1 muffin) |
| Pancakes, waffles | $60-90 \mathrm{~g}$ | ( $2-3$ pancakes, 1 or 2 waffles) |
| Pasta (macaroni, noodles, spaghetti) dry cooked | $\begin{array}{r} 45-85 \mathrm{~g} \\ 90-150 \mathrm{~g} \end{array}$ | ( $150-250 \mathrm{~mL}, 3 / \mathrm{s}-1 \mathrm{cup}$ ) |
| Pies | $100-160 \mathrm{~g}$ | 1/8-1/6 of 23 cm diameter pie) |
| Rice dry cooked | $\begin{array}{r} 30-40 \mathrm{~g} \\ 90-120 \mathrm{~g} \end{array}$ | ( $125-175 \mathrm{~mL}, 1 / 2-3 / 4 \mathrm{cup}$ ) |
| Eggs |  |  |
| Egg, without shell Simulated egg products | $\begin{aligned} & 50-100 \mathrm{~g} \\ & 50-100 \mathrm{~g} \end{aligned}$ | $\begin{aligned} & (1-2 \mathrm{eggs}) \\ & (50-125 \mathrm{~mL}, 1 / 4-1 / 2 \mathrm{cup}) \end{aligned}$ |
| Fats and Oils |  |  |
| Butter, margarine | 5-10g | ( $5-10 \mathrm{~mL}, 1-2 \mathrm{tsps}$. |
| Dressings for salads | 15 ml | (1 tbsp.) |
| Vegetable oils | 5-10 ml | (1-2 tsps.) |


| Column I <br> Name and Description | Serving Size | Column II <br> Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Fish and Shellfish <br> Fish raw, fresh, frozen cooked, canned, frozen Shellfish raw meat, cooked | $\begin{array}{r} 90-130 \mathrm{~g} \\ 60-100 \mathrm{~g} \\ 100-120 \mathrm{~g} \\ 70-90 \mathrm{~g} \end{array}$ | ( 1 fillet, 125 mL or $1 / 2$ cup canned) <br> 125 mL or $1 / 2 \mathrm{cup}$ (11 fried shrimp), 7 scallops) |
| Fruits and Related Products <br> Fruits, raw, edible portion other than berries <br> Berries, raw <br> Fruits, canned (solids and 25 mL liquid), frozen <br> Fruit, dried <br> Fruit juices, fresh, frozen, canned Fruit-flavoured drinks and beverages Lemon juice, lime juice | $\begin{array}{r} 110-160 \mathrm{~g} \\ 70-90 \mathrm{~g} \\ 120-150 \mathrm{~g} \\ 30-40 \mathrm{~g} \\ 175 \mathrm{~mL} \\ 175 \mathrm{~mL} \\ 30 \mathrm{~mL} \end{array}$ | ( 1 apple, 1 banana, 1 orange, 1 peach, $1 / 4$ cantaloupe. $1 / 2$ grapefruit) <br> ( $125-175 \mathrm{~mL}, 1 / 2-3 / 4 \mathrm{cup}$ ) <br> ( $125-150 \mathrm{~mL}, 1 / 2-2 / 3$ cup) <br> (4 prunes, 2 figs, 10 apricot halves, 1 small box raisins) <br> ( $3 / 4 \mathrm{cup}$ ) or 1 single serving container ( $3 / 4 \mathrm{cup}$ ) or 1 single serving container (2 tbsp) |
| Legumes, Nuts and Seeds <br> Legumes <br> Beans, common white, kidney beans, chick peas, lentils raw, dried cooked <br> Nuts <br> Peanut butter <br> Seeds <br> Tofu | $\begin{array}{r} 40-80 \mathrm{~g} \\ 100-200 \mathrm{~g} \\ 30-50 \mathrm{~g} \\ 35 \mathrm{~g} \\ 79 \mathrm{~g} \\ 90 \mathrm{~g} \end{array}$ | $\begin{aligned} & (125-250 \mathrm{~mL}, 1 / 2-1 \mathrm{cup}) \\ & (60-125 \mathrm{~mL}, 1 / 4-1 / 2 \mathrm{cup}) \\ & (30 \mathrm{~mL}, 2 \mathrm{tbsp}) \\ & (125 \mathrm{~mL}, 1 / 2 \mathrm{cup}) \\ & (7 \times 6 \times 2 \mathrm{~cm} \text { piece }) \end{aligned}$ |


| Column I <br> Name and Description | Serving Size | Column II <br> Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Meat, Poultry and Related Products. |  |  |
| Meat and poultry meat |  |  |
| Beef, boneless, lean and fat raw cooked | $\begin{aligned} & 90-130 g \\ & 60-100 g \end{aligned}$ | ( 2 medium slices roast, 1 hamburger patty) |
| Game, boneless, lean and fat raw cooked | $\begin{aligned} & 90-130 \mathrm{~g} \\ & 60-100 \mathrm{~g} \end{aligned}$ |  |
| Lamb, boneless, lean and fat raw cooked | $\begin{aligned} & 90-130 \mathrm{~g} \\ & 60-100 \mathrm{~g} \end{aligned}$ |  |
| Pork, fresh, boneless, lean and fat raw cooked | $\begin{aligned} & 90-130 \mathrm{~g} \\ & 60-100 \mathrm{~g} \end{aligned}$ | (2-3 slices roast) |
| Pork, cured |  |  |
| Bacon, side |  | (3 slices) |
| cooked | 25 g | (3 slices) |
| Bacon, back |  |  |
| raw | 70 g | (2 slices) |
| cooked | 40 g | (2 slices) |
| Ham |  |  |
| raw | $120 \mathrm{~g}$ | (2-3 slices) |
| cooked | 60-100g | (2-3 slices) |
| Poultry, boneless (chicken or turkey) raw cooked | $\begin{aligned} & 90-130 \mathrm{~g} \\ & 60-100 \mathrm{~g} \end{aligned}$ | (2-3 slices) |
| Veal, boneless, lean and fat raw cooked | $\begin{aligned} & 90-130 g \\ & 60-100 g \end{aligned}$ |  |
| Organ and glandular meats (heart, kidney, liver, tongue, sweetbreads) <br> raw <br> cooked | $\begin{aligned} & 90-130 g \\ & 60-100 g \end{aligned}$ |  |
| Prepared meat and prepared meat by-products |  |  |
| Liver paste, meat paste, meat spread, potted meat <br> Luncheon meat, meat loaf | $\begin{array}{r} 30-40 \mathrm{~g} \\ 60 \mathrm{~g} \end{array}$ | $\begin{aligned} & (30-45 \mathrm{~mL} \text { or } 2-3 \mathrm{tbsps}) \\ & (2 \text { slices }) \end{aligned}$ |
| ```Sausage, fresh raw cooked``` | $\begin{array}{r} 120-160 \mathrm{~g} \\ 60-100 \mathrm{~g} \end{array}$ | (2-4 links regular, 1-2 links large) <br> (2-4 links regular, 1-2 links large) |


| Column I <br> Name and Description | Serving Size | Colurnn II <br> Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Sausage, cooked |  |  |
| Bologna, salami, other cooked sausage products <br> Wieners | $\begin{array}{r} 60 \mathrm{~g} \\ 40-80 \mathrm{~g} \end{array}$ | (2 slices) <br> (1-2 wieners) |
| Prepared poultry meat and prepared poultry meat by-products <br> Extended meat products | 30-60g |  |
| Extended meat product other than extended meat product that resembles fresh sausage, cooked sausage, luncheon meat, meat loaf, liver paste, meat paste, meat spread, potted meat <br> raw <br> cooked <br> Extended meat product that resembles fresh sausage <br> raw <br> cooked | $\begin{array}{r} 90-130 \mathrm{~g} \\ 60-100 \mathrm{~g} \\ \\ 120-160 \mathrm{~g} \\ 60-100 \mathrm{~g} \end{array}$ |  |
| Extended meat product that resembles cooked sausage, luncheon meat, meat loaf | $60-100 \mathrm{~g}$ |  |
| Extended meat product that resembles liver paste, meat paste, meat spread, potted meat | 30-40g |  |
| Extended poultry products raw cooked | 120 g 90 g |  |
| Simulated meat products |  |  |
| Simulated meat product other than simulated meat product that resembles bacon (side and back), fresh sausage, cooked sausage, luncheon meat, meat loaf, liver paste, meat paste, meat spread, potted meat <br> raw <br> cooked | $\begin{aligned} & 90-130 \mathrm{~g} \\ & 60-100 \mathrm{~g} \end{aligned}$ |  |
| Simulated meat product that resembles side bacon <br> raw cooked | $\begin{aligned} & 80 \mathrm{~g} \\ & 25 \mathrm{~g} \end{aligned}$ |  |


| Column I Name and Description | Serving Size | Column II <br> Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Simulated meat product that resembles back bacon <br> raw <br> cooked | 70 g 40 g |  |
| Simulated meat product that resembles fresh sausage <br> raw <br> cooked | 120 g 60 g |  |
| Simulated meat product that resembles cooked sausage, luncheon meat, meat loaf | 60 g |  |
| Simulated meat product that resembles liver paste, meat paste, meat spread, potted meat | 40 g |  |
| Simulated poultry products raw cooked | 120 g 90 g |  |
| Milk Products |  |  |
| Cheese, processed cheese, processed cheese food, processed cheese spread | 30-45 g | (30-45 mL, 2-3 tbsps.) |
| Cheese, cottage, creamed | 120 g | ( $125 \mathrm{~mL}, 1 / 2 \mathrm{cup}$ ) |
| Cream, whipping, table or coffee cream, sour cream | 30 g | (30 mL, 2 tbsp) |
| Evaporated milk, evaporated skim milk, evaporated partly skim milk | 125 mL | ( $250 \mathrm{~mL}, 1$ cup reconstituted) |
| Ice cream, ice milk, sherbet, frozen desserts | 125 mL | (1/2 cup) |
| Milk, skim milk, partly skimmed milk, sterilized milk, flavoured milk, buttermilk | 200 or 250 mL | 200 or 250 mL |
| Milk powder, skim milk powder | $25 \mathrm{~g}$ | ( 75 mL or $1 / 3$ cup dry; 250 mL , or 1 cup reconstituted) |
| Milk puddings | 140 g | ( $125 \mathrm{~mL}, 1 / 2 \mathrm{cup}$ ) |
| Yogurt, plain and fruit varieties | 125-175 g | ( $125-175 \mathrm{~mL}, 1 / 2-3 / 4 \mathrm{cup}$ ) |



| Column I <br> Name and Description | Serving Size | Column II Household Measure or Unit of Food Approximate Equivalent to Serving Size |
| :---: | :---: | :---: |
| Vegetables and Related Products |  |  |
| Tomato juice, vegetable juice, vegetable drink | 125-175 mL | or single serving container |
| Vegetables, raw, edible portion | 30-70g | ( $75-250 \mathrm{~mL}, 1 / 3-1$ cup, 1 carrot, 1 stalk celery, $1 / 2$ cup shredded cabbage, 1 cup lettuce, $1 / 3$ cup green peppers) |
| Tomatoes, raw | 60-100 g | ( 1 small to medium) |
| Vegetables, cooked, canned, frozen, drained (including string beans, beets, broccoli, brussels sprouts, cabbage, carrots, cauli- |  |  |
| flower, corn, greens, mushrooms, parsnips, peas, spinach, squash, etc.) | 70-110g | ( $125 \mathrm{~mL}, 1 / 2 \mathrm{cup}$ ) |
| Potatoes, cooked | $110-150 \mathrm{~g}$ | (1 potato, medium) |
| french fried | 70-110g | (15-25 large strips) |
| Green salad without dressing | 65 g | (1 cup) |
| Miscellaneous |  |  |
| Flavoured beverage mixes and bases for addition to milk | 10 g | ( $250 \mathrm{~mL}, 1$ cup reconstituted) |
| Gravy | 25-50 mL | (2-4 tbsp) |
| Mustard (prepared), relish (sour and sweet) | 15 g | ( $15 \mathrm{~mL}, 1 \mathrm{lbsp}$.) |
| Olives, pickles | 20 g | (1 gherkin, 2 pickles, 5 olives) |
| Snacks (potato chips, corn chips, popcorn, pretzels) | $15-40 \mathrm{~g}$ | ( 12 potato chips or 1 small bag chips, 2 cups popcorn, 6 pretzels) |
| Tacos, cheese | 50 g | (1 taco) |
| Tomato catsup | 15 g | ( $15 \mathrm{~mL}, 1 \mathrm{tbsp}$ ) |

10. SCHEDULE K
(FOOD AND DRUG REGULATIONS)

## REASONABLE DAILY INTAKE FOR VARIOUS FOODS

| Column I <br> Name and Descriptions | Column II <br> Reasonable Daily Intake |  |
| :---: | :---: | :---: |
| 1. Alimentary Pastes, dry | 3.0 oz | 85 g |
| 2. Bacon (side) simulated meat product that resembles side bacon, (cooked) | 1.0 oz | 28 g |
| 3. Beverage Bases and Mixes, Flavoured, for Addition to Milk (ready-to-serve) | 16.0 fl oz | 454 ml |
| 4. Bread, 5 slices | 5.3 oz | 150 g |
| 5. Butter | 2.0 oz | 57 g |
| 6. Buttermilk | 30.0 fl oz | 852 ml |
| 7. Cereals, Breakfast or Infant | 1.0 oz | 28 g |
| 8. Cereals, puffed | 0.5 oz | 14 g |
| 9. Cheese (other than Cottage Cheese) | 2.0 oz | 57 g |
| 10. Cheese, Cottage | 3.5 oz | 100 g |
| 11. Condensed Milk | 15.0 fl oz | 426 ml |
| 12. Cream, whipping | 2.0 oz | 57 g |
| 13. Egg, yolk-replaced egg | 3.5 oz | 100 g |
| 14. Evaporated Milk, Evaporated Skim Milk, Evaporated Partly Skimmed Milk | $\begin{aligned} & 15.0 \mathrm{fl} \mathrm{oz} \\ & 30.0 \mathrm{fl} \mathrm{oz} \end{aligned}$ | $\begin{aligned} & 426 \mathrm{ml} \\ & 852 \mathrm{ml} \end{aligned}$ |
|  | (reco | iginal volume) |
| 15. Fish, Shell Fish | 3.5 oz | 100 g |
| 16. Fruits, dried | 2.0 oz | 57 g |
| 17. Fruits, (other than banana, lemon, lime, | 3.5 oz | 100 g |
| watermelon) | 5.3 oz | 150 g |
| 18. Fruits, Banana | 1.8 oz | 50 g |
| 19. Fruits, Lemon | 1.8 oz | 50 g |
| 20. Fruits, Lime | 7.0 oz | 200 g |
| 21. Fruits, Watermelon |  |  |
| 22. Fruit Drinks, Fruit Nectars (ready-to-serve) | 4.0 fl oz | 114 ml |
| 23. Fruit Drink Bases, Mixes and Concentrates (ready-to-serve) | 4.0 fl oz | 114 ml |
| 24. Fruit Juices (other than lemon juice and lime juice) | 4.0 fl oz | 114 ml |
| 25. Fruit Juices, Lemon | 1.0 fl oz | 28 ml |
| 26. Fruit Juices, Lime | 1.0 fl oz | 28 ml |
| 27. Ice Cream, Ice Milk | 3.5 oz | 100 g |
| 28. Infant Formulas, Prepared (ready-to-serve) |  | by Label |
| 29. Instant Breakfast, Ready Breakfast (ready-to-serve) |  | by Label |
| 30. Margarine | 2.0 oz | 57 g |
| 31. Meat Products | 3.5 oz | 100 g |
| 32. Meat Product Extenders | 3.5 oz | 100 g |
| 33. Extended Meat Products | 3.5 oz | 100 g |
| 34. Milk, whole | 30.0 fl oz | 852 ml |
| 35. Milk Powder (reconstituted and ready-to-serve) | 30.0 fl oz | 852 ml |
| 36. (naming the flavour) Milk | 30.0 fl oz | 852 ml |
| 37. Molasses | 1.5 oz | 43 g |
| 38. Nuts | 1.0 oz | 28 g |
| 39. Peanut Butter | 1.0 oz | 28 g |


|  | Column I <br> Name and Description | Column II Reasonable Daily Intake |  |
| :---: | :---: | :---: | :---: |
| 40. | Poultry Products | 3.5 oz | 100 g |
| 41. | Extended Poultry Products | 3.5 oz | 100 g |
| 42. | Poultry Product Extenders | 3.5 oz | 100 g |
| 43. | Simulated Meat Products excluding a simulated meat product that resembles side bacon | 3.5 oz | 100 g |
| 44. | Simulated Poultry Products | 3.5 oz | 100 g |
| 45. | Skim Milk, Partly Skimmed Milk | 30.0 fl oz | 852 ml |
| 46. | (naming the flavour) Skim Milk, (naming the flavour) Partly Skimmed Milk | 30.0 fl oz | 852 ml |
| 47. | Skim Milk Powder, Partly Skimmed Milk Powder (reconstituted) and ready-to-serve | 30.0 fl oz | 852 ml |
| 48. | Skim Milk with Added Milk Solids, Partly Skimmed Milk with Added Milk Solids | 30.0 fl oz | 852 ml |
| 49. | (naming the flavour) Skim Milk with Added Milk Solids, (naming the flavour) Partly Skimmed Milk with Added Milk Solids | 30.0 fl oz | 852 ml |
| 50. | Soup (ready-to-serve) | 7.0 fl oz | 200 ml |
| 51. | Sterilized Milk | 30.0 fl oz | 852 ml |
| 52. | Vegetable Juices | 4.0 fl oz | 114 ml |
| 53. | Vegetable Drinks | 4.0 fl oz | 114 ml |
| 54. | Vegetable Drink Concentrates, Mixes and Bases (ready-to-serve) | 4.0 fl oz | 114 ml |
| 55. | Vegetable (other than baked beans and cooked potatoes) | 3.5 oz | 100 g |
| 56. | Vegetables, baked beans | 8.5 oz | 250 g |
| 57. | Vegetables, cooked potatoes | 7.0 oz | 200 g |
| 58. | Yeast | 0.5 oz | 14 g |
| 59. | Yogurt, plain | 5.0 oz | 150 g |

11. FOODS TO WHICH VITAMINS, MINERAL NUTRIENTS OR AMINO ACIDS CAN BE ADDED

TABLE (D.03.002)

|  | COLUMN I <br> Food |
| :--- | :--- |
| 1. | Breakfast cereals. |
| 2. | Fruit nectars, vegetable drinks, bases and mixes for <br> vegetable drinks and a mixture of vegetable juices |
| 2.1 | Fruit flavoured drinks that meet all the requirements of <br> section B.11.150 |
| 2.2 | Bases, concentrates and mixes that are used for making | fruit flavoured drinks and that meet all the requirements of section B. 11.151

3. Infant cereal products
4. Margarine and other similar substitutes for butter
5. Alimentary pastes
6. Infant formulas and formulated liquid diets
7. Flavoured beverage mixes and bases recommended for addition to milk
8. Simulated meat products, simulated poultry meat products, meat product extenders and poultry product extenders

Thiamine, niacin, vitamin $\mathrm{B}_{6}$, folic acid, pantothenic acid, magnesium, iron and zinc.

Vitamin C.

Vitamin C, folic acid, thiamine, iron, potassium.

Vitamin C, folic acid, thiamine, iron, potassium.

Thiamine, riboflavin, niacin or niacinamide, calcium, phosphorus, iron, iodine.

Vitamin A, Vitamin D, alpha-tocopherol.
Thiamine, riboflavin, niacin or niacinamide, iron.
Amino Acids -- alanine, arginine, aspartic acid, cystine, glutamic acid, glycine, histidine, hydroxyproline, isoleucine, leucine, lysine, methionine, phenylalanine, proline, serine, taurine, threonine, tryptophan, tyrosine, valine; Minerals -- calcium, chloride, chromium, copper, iodide, iron, magnesium, manganese, molybdenum, phosphorus, potassium, selenium, sodium, zinc;
Vitamins -- alpha-tocopherol, biotin, d-pantothenic acid, folic acid, niacin, riboflavin, thiamine, vitamin $A$, vitamin $B_{6}$, vitamin $_{12}$, vitamin C, vitamin D, vitamin K.

Vitamin A, thiamine, niacin or niacinamide, vitamin $C$, iron.

Thiamine, riboflavin, niacin, pyridoxine, d-pantothenic acid, folic acid, vitamin $B_{12}$, iron, magnesium, potassium, zinc, copper, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, valine.

|  | COLUMN I <br> Food |
| :---: | :---: |

9. Subject to item 9.1 meal replacements that meet all the requirements of B. 24.200 whether or not they are sold or represented for use in a weight reduction diet
9.1 Ready breakfast, instant breakfast and other similar breakfast replacement foods however described
10. Condensed milk, milk powder, sterilized milk, (naming the flavour) milk
11. Skim milk with added milk solids, partly skimmed milk with added milk solids, (naming the flavour) skim milk, (naming the flavour) partly skimmed milk, (naming the flavour) skim milk with added milk solids, (naming the flavour) partly skimmed milk with added milk solids, skim milk, partly skimmed milk, skim milk powder
12. Evaporated milk
13. Evaporated skim milk, concentrated skim milk, evaporated partly skimmed milk, concentrated partly skimmed milk
14. Apple juice, reconstituted apple juice, grape juice, reconstituted grape juice, pineapple juice, reconstituted pineapple juice, apple and (naming the fruit) juice as described in section B.11.132, concentrated fruit juice except frozen concentrated orange juice
15. Flour, white flour, enriched flour or enriched white flour
16. Enriched vitamin B white flour
17. Table salt, table salt substitutes
18. Dehydrated potatoes
19. Products simulating whole egg
20. Foods for fat-modified diets meeting the requirements of subparagraphs B.24.015(d)(i) and (ii)
21. Goat's milk, goat's milk powder

## COEUMN II

Vitamin, Mineral Nutrient or Amino Acid
Minerals -- calcium, chloride, copper, iodine, iron, magnesium, manganese, phosphorus, potassium, sodium, zinc
Vitamins -- alpha-tocopherol, biotin, d-pantothenic acid, folic acid, niacin or niacinamide, thiamine, vitamin $A$, vitamin $B_{6}$, vitamin $B_{12}$, vitamin $C$, vitamin $D$, riboflavin.

Vitamin A, thiamine, riboflavin, niacin or niacinamide, vitamin $C$, iron

Vitamin D.

Vitamin A, vitamin D.

Vitamin C, vitamin D.
Vitamin A, vitamin C, vitamin D.

Vitamin C.

Thiamine, riboflavin, niacin, vitamin $B_{6}$, folic acid, d-pantothenic acid, calcium, iron, magnesium.

Thiamine, riboflavin, niacin or niacinamide, iron.
Iodine.
Vitamin C.
Vitamin A, thiamine, riboflavin, niacin or niacinamide, vitamin $B_{6}$, d-pantothenic acid, folic acid, vitamin $B_{12}$, alphatocopherol, calcium, iron, zinc, potassium.

Alpha-tocopherol.

Vitamin D.

|  | CMMN I <br> Food | COLUMN II <br> Vitamin, Mineral Nutrient or Amino Acid |
| :--- | :--- | :--- |
| 22.Partly skimmed goat's milk, skimmed goat's milk, <br> partly skimmed goat's milk powder, skimmed goat's <br> milk powder | Vitamins A and D. |  |
| 23.Evaporated goat's milk | Vitamins C, D, folic acid. |  |
| 24.Evaporated partly skimmed goats' milk, evaporated <br> skimmed goat's milk | Vitamins A, C, D, folic acid. |  |
| 25.Pre-cooked rice as defined in subsection B.13.010.1(1) | Thiamine, niacin, vitamin B6, folic acid, pantothenic acid, <br> iron. |  |
| 26.Mineral water, spring water, water in sealed containers, <br> prepackaged ice | Fluorine. |  |

## 11. REFERENCES

Canadian Nutrient File, Health and Welfare Canada, Health Protection Branch, Ottawa, 1986
Food and Drugs Act and Regulations, Health and Welfare Canada, Ottawa, Ontario, 1988
Guide for Food Manufacturers and Advertisers, Consumer and Corporate Affairs Canada, Hull, Québec, 1988

Guidelines on Nutrition Labelling, Health and Welfare Canada, Health Protection Branch, Ottawa, Ontario, November 1988

Nutrient Value of Some Common Foods, Health and Welfare Canada, Health Protection Branch, Ottawa, Ontario, 1988

Nutrition Recommendations, The Report of the Scientific Review Committee, Health and Welfare Canada, Ottawa, Ontario, 1990

USDA Handbook No. 8: Composition of Foods, United States Department of Agriculture, 1984.


[^0]:    * Recommended Daily Intake of Vitamin $E$ for persons of 2 years of age or older is 10 mg .

[^1]:    2 To claim that a food is a "good source" or "high in" vitamin C, it must provide $\geq 30 \% \mathrm{RDI}$;
    b to claim that a food is a "very high" or an "excellent source" of vitamin C, it must provide $\geq 50 \%$ RDI.

