Canadian Community Health Survey (CCHS)

Cycle 2.2 (2004)
Nutrition: General Health File (including vitamin and mineral supplements) and 24-Hour Dietary Recall

MASTER AND SHARE FILES

Derived Variables Documentation

April 2008

Statistics Canada Statistique Canada

Canada

Table of contents

Geography Variables (15 DVs)

1) Health region of residence of respondent

Variable name: GEODDHR4
Based on: GEODDPC
Previous usage:
CCHS Cycle 2.1 name: GEOCDHR4
CCHS Cycle 1.1 name: GEOADHR4
Description: This variable is derived using the information available on the survey frame at the time of sampling and the geographic information provided by the respondent.

2) Ontario District Health Council

Variable name: GEODDON
Description: This variable is a 4-digit number that identifies the 2003 sub-provincial health areas of Ontario specified by this province. For records of people not living in Ontario, this variable is set to NA (not applicable).
Technical specifications: To better reflect recent boundary changes, Ontario Officials provided a file containing for each EA, the corresponding 2003 new health regions definitions. Using the EA variable derived for each record (GEODDEA), the correspondence was used to define this new health region variable present on the file.

3) 2001 Dissemination area (DA)

Variable name: GEODDDA
Based on: GEODDPC
Description: The dissemination area (DA) is a small, relatively stable geographic unit composed of one or more blocks. Dissemination areas cover all of the territory of Canada and replace the enumeration area (which is now used only for census data collection) as the smallest standard census geographic area. Using GEODDPC, GEODDDA is derived using the Postal Code Conversion File (PCCF), which provides a correspondence between the six character postal code and Statistics Canada's standard geographical areas for which census data and other statistics are produced. When the postal code corresponds to more than one DA, the case is assigned using the “most probable DA approach”.

4) Federal electoral district (FED)

Variable name: GEODDFED
Based on: GEODDDA
Previous usage:
CCHS Cycle 2.1 name: GEOCDFED
CCHS Cycle 1.1 name: GEOADFED
NPHS Cycle 5 name: GE32DFED
NPHS Cycle 4 name: GE30DFED
NPHS Cycle 3 name: GE38DFED
NPHS Cycle 2 name: GE36DFED
NPHS Cycle 1 name: GE34DFED (formerly DVFEDA)
Description: This variable is derived from geoCdDA using the Postal Code Conversion File (PCCF). Based on 1996 Representation Order.

5) Census subdivision (CSD)

Variable name: GEODDCSD
Based on: GEOD_PC
Previous usage: GEODDPC
CCHS Cycle 2.1 name: GEODPCSD
CCHS Cycle 1.1 name: GEOAPCSD
NPHS Cycle 5 name: GE32DCSD
NPHS Cycle 4 name: GE30DCSD
NPHS Cycle 3 name: GE38DCSD
NPHS Cycle 2 name: GE36DCSD
NPHS Cycle 1 name: GE34DCSD (formerly DVCSDA)
Description: The Census Subdivision is the general term applied to municipalities (as determined by provincial legislation) or their equivalent, e.g., Indian reserves, Indian settlements and unorganized territories. In Newfoundland, Nova Scotia and British Columbia, the term also describes geographic areas that have been created by Statistics Canada in co-operation with the provinces as equivalents for municipalities. GEODDCSD is derived from GEODDDA using the Postal Code Conversion File (PCCF).

6) Census division (CD)

Variable name: GEODDCD
Based on: GEODDPC
Previous usage:
CCHS Cycle 2.1 name: GEOCDCD
CCHS Cycle 1.1 name: GEOADCD
NPHS Cycle 5 name: GE32DCD
NPHS Cycle 4 name: GE30DCD
NPHS Cycle 3 name: GE38DCD
NPHS Cycle 2 name: GE36DCD
NPHS Cycle 1 name: GE34DCD (formerly DVCDA)
Description: The Census Division refers to geographic areas established by provincial law, which are intermediate geographic areas between the census subdivision and the province (e.g., divisions, counties, regional districts, regional municipalities and seven other types of geographic areas made up of groups of census subdivisions). In Newfoundland, Manitoba, Saskatchewan and Alberta, provincial law does not provide for these administrative geographic areas. Therefore, census divisions have been created by Statistics Canada in co-operation with these provinces. GEODDCD is derived from GEODDDA using the Postal Code Conversion File (PCCF).

7) Statistical area classification type (SAT)

Variable name: GEODDSAT
Based on: GEODDCSD
Description: The Statistical Area Classification Type (SAT) groups Census Subdivisions according to whether they are a component of a census metropolitan area (CMA), a census agglomeration (CA), a census metropolitan area and census agglomeration influenced zone (strong MIZ, moderate MIZ, weak MIZ or no MIZ), or the territories (Yukon Territory, Northwest Territories and Nunavut).

8) Census metropolitan area (CMA)

Variable name: GEODDCMA
Based on: GEODDCMA
Previous usage:
CCHS Cycle 2.1 name: GEOCDCMA
CCHS Cycle 1.2 name: GEOBDCMA
CCHS Cycle 1.1 name: GEOADCMA
NPHS Cycle 5 name: GE32DCMA
NPHS Cycle 4 name: GE30DCMA
NPHS Cycle 3 name: GE38DCMA
NPHS Cycle 2 name: GE36DCMA
NPHS Cycle 1 name: GE34DCMA
Description: The general concept of a census metropolitan area (CMA) is one of a very large urban area, together with adjacent urban and rural areas which have a high degree of economic and social integration with that urban area. A CMA is delineated around an urban area (called the urbanized core and having a population of at least 100,000, based on the previous census). There are 25 CMAs according to the 1996 Census definition (see data dictionary for a definition of each code).
Technical specifications: GEODDEA is used to derive GEODDCMA from the PCCF.

9) 1996 Enumeration area (EA)

Variable name: GEODDEA
Based on: GEODDPC
Previous usage:
CCHS Cycle 1.2 name: GEOCDEA
CCHS Cycle 1.2 name: GEOBDEA
CCHS Cycle 1.1 name: GEOADEA
Description: An enumeration area (EA) is the geographic area canvassed by one census representative. (Before the 2001 Census, the EA was the smallest standard geographic area for which census data were reported. Beginning with the 2001 census, the EA was replaced by the DA for all purposes other than data collection.) Using GEODDPC, GEODDEA is derived using the Postal Code Conversion File (PCCF), which provides a correspondence between the six character postal code and Statistics Canada's standard geographical areas for which census data and other statistics are produced. When the postal code corresponds to more than one EA, the case is assigned using the “most probable EA approach”.

10) Postal code

Variable name: GEODDPC
Based on: Respondent address information
Previous usage:
CCHS Cycle 2.1 name: GEOCDPC
CCHS Cycle 1.2 name: GEOBDPC
CCHS Cycle 1.1 name: GEOADPC
NPHS Cycle 5 name: SP32DPC
NPHS Cycle 4 name: SP30DPC
NPHS Cycle 3 name: SP38DPC
NPHS Cycle 2 name: SP36DPC
NPHS Cycle 1 name: SP34DPC (formerly DVPCA)
Description: The postal code is a six-character alpha-numeric code defined and maintained by Canada Post Corporation. The alpha-numeric characters are arranged in the form ANA NAN, where "A" represents a letter of the alphabet and "N" a numeric digit. The first character of a postal code (allocated in alphabetic sequence from east to west across Canada) represents a province or territory, or a major sector entirely within a province. GEODDPC is derived from the respondent available address information.

11) Urban and rural areas - 7 levels

Variable name: GEODDUR7
Based on: GEODDPC
Previous usage:
CCHS 2.1 name: GEOCDUR5
CCHS 1.1 name: GEOADUR5
NPHS Cycle 5 name: GE32DURB
NPHS Cycle 4 name: GE30DURB
NPHS Cycle 3 name: GE38DURB
NPHS Cycle 2 name: GE36DURB
NPHS Cycle 1 name: GE34DURB (formerly DVURBA)

Description: This variable identifies whether the respondent lives in an urban or rural area. Urban areas are those continuously built-up areas having a population concentration of 1,000 or more and a population density of 400 or more per square kilometre based on current census population counts. A census metropolitan area (CMA) or a census agglomeration (CA) is formed by one or more adjacent municipalities centred on a large urban area (known as the **urban core**). The census population count of the urban core is at least 10,000 to form a census agglomeration and at least 100,000 to form a census metropolitan area. The urban areas in the CMA or CA that are not contiguous to the urban core are called the **urban fringe**. Rural areas in the CMA or CA are called the **rural fringe**. After a CA is merged with a CMA, the urban core of the former CA is called the **secondary urban core** of the CMA. For more details please consult the following Census Geography web site:
http://geodepot.statcan.ca/Diss/Reference/COGG/LongDescription_e.cfm?GEO_LEVEL=5&REFCODE=1&LANG=E

The value of this variable is missing for about 5% of the postal codes in Canada.

Value of GEODDUR7	Explanation
0	Missing
1	Urban core
2	Urban fringe
3	Rural fringe inside CMAs and CAs
4	Urban area outside CMAs and CAs
5	Rural fringe outside CMAs and CAs
6	Secondary urban core

12) Urban and rural areas – 2 levels

Variable name: GEODDUR2
Based on: GEODDUR7
Previous usage:
CCHS 2.1 name: GEOCDUR2
CCHS 1.1 name: GEOADUR2
NPHS Cycle 5 name: not applicable
NPHS Cycle 4 name: GE30DURB
NPHS Cycle 3 name: GE38DURB
NPHS Cycle 2 name: GE36DURB
NPHS Cycle 1 name: GE34DURB
Description: This variable is a grouping of GEOCDUR7 into 2 categories.

Value of GEODDUR2	Condition	Explanation
1	GEODDUR7= 1, 2, 4 or 6	Urban
2	GEODDUR7= 0, 3 or 5	Rural

13) Sampling frame stratum

Variable name: GEODDSTR
Based on: Sampling design information
Description: This is the stratification variable used in the sampling design. The first digit represents the frame: 1 = cycle 2.2 area frame, 2 = cycle 2.1 frame, 4 = Manitoba register and 5 = PEI register. A stratum is a grouping of several sampling units where independent samples are selected within each stratum. These sampling units can represent clusters of respondents or the respondents themselves. Strata often represent subgroups of interest to the investigator.

14) Sampling frame primary sampling unit (cluster)

Variable name: GEODDPSU
Based on: Sampling design information
Description: This is the primary sampling unit (cluster) variable used in the sampling design. A cluster is a subgroup of several members of the population who have something in common such as proximity. Clusters are often grouped into strata and samples of clusters are selected by the survey. Within the selected clusters, all or some of the units of interest are selected to participate in the survey.

15) Population Size Group

Variable name: GEODDPSZ
Based on: GEODDPC, GEODDCMA
Description: This derived variable is used in the calculation of adjusted household income ratios (INCDDADR). It identifies whether the respondent lives in an urban or rural area and classifies the respondent according to the population size of the urban area (or Census Metropolitan Area, CMA). In order to properly classify units into rural and urban groups and identify units belonging to Census Metropolitan Areas, the postal code (GEODDPC) is linked to the information on the most recent Postal Code Conversion File (PCCF). Population counts for these areas are determined by linking to the information available from GEOSUITE. The combined information is then used to code GEODDPSZ as follows:

Value of GEODDPSZ	Condition(s)	Explanation
1	Rural	Rural Area
2	Population size of the urban area (or CMA) < 30,000	Urban Area Less than 30,000 people
3	30,000 >= Population size of the urban area (or CMA) < 100,000	Urban Area 30,000 to 99,999 people
4	100,000 >= Population size of the urban area (or CMA) < 500,000	Urban Area 100,000 to 499,999 people
5	Population size of the urban area (or CMA) >= 500,000	Urban Area 500,000 people or more

Sample Variables (4 DVs)

1) Permission to share data

Variable name: SAMDDSHR
Based on: ADM_Q04 (Share question from health questionnaire [not on file]), PS_Q01 (Share question from Exit questionnaire [not on file]).
Previous Usage:
CCHS 2.1 name: SAMCDSHR
CCHS 1.2 name: SAMBDSHR
CCHS 1.1 name: SAMADSHR
Description: This variable indicates whether or not the respondent agreed to share the information collected during the first recall dietary interview with the provincial ministries of health, Health Canada, and the "Institut de la Statistique du Québec" for Quebec respondents, as stated in ADM_Q04 and PS_Q01.

Value of SAMDDSHR	Condition(s)	Description
1	(ADM_Q04 = 1 and PS_Q01 <> 2) or (ADM_Q04 <> 2 and PS_Q01 = 1)	Respondent agreed to share information
9 (NS)	ADM_Q04 = NS and PS_Q01 = NS	Respondent was not asked to share information
2	Else	Respondent did not agree to share information

2) Permission to share data – second recall interview

Variable name: SAMDDSH2
Based on: PS_Q01 (Share question from Exit questionnaire [not on file]).
Previous Usage: This is a new derived variable
Description: This variable indicates whether or not the respondent agreed to share the information collected during the "second dietary recall interview" with the provincial ministries of health, Health Canada, and the "Institut de la Statistique du Québec" for Quebec respondents, as stated in PS_Q01.
Note: All respondents were asked to participate in the "first recall interview", while only 30% of respondents from all age groups were selected to be interviewed for the "second recall interview". The second recall interview usually conducted 3 to 10 days after the initial interview is used to measure how much a person's diet changes from one day to the next.

Value of SAMDDSH2	Condition(s)	Description
6 (NA)	ADMDFSID = NA	Population exclusion
9 (NS)	PS_Q01 = NS	Respondent was not asked to share information
1	PS_Q01 = 1	Respondent agreed to share information
2	Else	Respondent did not agree to share information

3) Permission to link data

Variable name: SAMDDLNK
Based on: ADM_Q01B (Link question from health questionnaire [not on file])
Previous Usage:
CCHS 2.1 name: SAMCDLNK
CCHS 1.2 name: SAMBDLNK
CCHS 1.1 name: SAMADLNK
Description: This variable indicates whether or not the respondent agreed that the information collected during the first dietary recall interview be linked with administrative records of their past and current use of health services.

Value of SAMDDLNK	Condition(s)	Description
1	ADM_Q01B = 1	Respondent agreed to link information
9 (NS)	ADM_Q01B = NS	Respondent was not asked the link question
2	Else	Respondent did not agree to link information

4) Permission to link data – second recall interview

Variable name: SAMDDLK2
Based on: LNK_Q01 (Link question from health questionnaire [not on file])
Previous Usage: This is a new derived variable.
Description: This variable indicates whether or not the respondent agreed that the information collected during the second dietary recall interview be linked with administrative records of their past and current use of health services.
Note: All respondents were asked to participate in the "first dietary recall interview", while only 30% of respondents from all age groups were selected to be interviewed for the "second dietary recall interview". The second recall interview usually conducted 3 to 10 days after the initial interview is used to measure how much a person's diet changes from one day to the next.

Value of SAMDDLK2	Condition(s)	Description
6 (NA)	ADMDFSID = NA	Population exclusion
9 (NS)	LNK_Q01 = NS	Respondent was not asked the link question
1	LNK_Q01 = 1	Respondent agreed to link information
2	Else	Respondent did not agree to link information

Administration (2 DVs)

1) Reference day – 24-hour dietary recall interview

Variable name: ADMDDD
Based on: ADMD_DOI, ADMD_MOI, ADMD_YOI
Previous usage: This is a new derived variable.
Description: During the 24-hour dietary recall interview, respondents were asked about all food consumed during the previous 24-hour period. That is, if the interview was conducted on Monday, the respondent was asked what he/she ate or drank on Sunday, from midnight to midnight. This variable indicates the day of the week when the food was consumed.
Note: All respondents were asked to participate in the "first dietary recall interview", while only 30% of respondents from all age groups were selected to be interviewed for the "second recall interview". The second recall interview - usually conducted 3 to 10 days after the initial interview - was used to measure how much a person's diet changed from one day to the next.

Value of ADMDDD	Condition(s)	Description
1	ADMD_DOI, ADMD_MOI, ADMD_YOI = Monday	Sunday
2	ADMD_DOI, ADMD_MOI, ADMD_YOI = Tuesday	Monday
3	ADMD_DOI, ADMD_MOI, ADMD_YOI = Wednesday	Tuesday
4	ADMD_DOI, ADMD_MOI, ADMD_YOI = Thursday	Wednesday
5	ADMD_DOI, ADMD_MOI, ADMD_YOI = Friday	Thursday
6	ADMD_DOI, ADMD_MOI, ADMD_YOI = Saturday	Friday
7	ADMD_DOI, ADMD_MOI, ADMD_YOI = Sunday	Saturday

2) Weekend reference day – 24-hour dietary recall interview

Variable name: ADMDFW
Based on: ADMDDD
Previous usage: This is a new derived variable.
Description: This variable indicates whether or not the nutrition information reported - during the 24-hour dietary recall interview - was collected for foods consumed during the weekend.
Note (1): Weekend is defined as Friday, Saturday, and Sunday.
Note (2): All respondents were asked to participate in the "first dietary recall interview", while only 30% of respondents from all age groups were selected to be interviewed for the "second dietary recall interview". The second recall interview - usually conducted 3 to 10 days after the initial interview - was used to measure how much a person's diet changed from one day to the next.

Value of ADMDFW	Condition(s)	Description
9 (NS)	ADMDDD = NS	Required question was not answered
1	(ADMDDD = 1, 6, 7)	Food consumed during weekend
2	2 <= ADMDDD <= 5	Food consumed during weekday

Dwelling and Household Record Variables (10 DVs)

1) Number of younger children in household

Variable name: DHHDDYKD
Based on: PERSONID, DHHD_AGE, RELATIONSHIP
Previous usage: This is a new derived variable.
Description: This variable indicates the number of children living within a household whose age is 15 or less years old.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONID's that have a DHHD_AGE value of 15 or less within each SAMPLEID.

Value of DHHDDYKD	Condition(s)	Description
Total number of PERSONID's with each SAMPLEID (values: 0-40)	DHHD_AGE <= 15 (Member file)	Number of children aged 15 or less in a household.

2) Number of older children in household

Variable name: DHHDDOKD
Based on: PERSONID, DHHD_AGE, RELATIONSHIP
Previous usage: This is a new derived variable.
Description: This variable indicates the number of children living within a household whose age is 16 or 17 years old and whose relationship to at least one adult living within the household is child, grandchild, child-in-law or, niece or nephew.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONID's that have a DHHD_AGE value of 16 or 17 and whose RELATIONSHIP value of (51, 52, 53, 80, 100, 112 or 123) within each SAMPLEID.

Value of DHHDDOKD	Condition(s)	Description
Total number of PERSONID's with each SAMPLEID (values: 0-40)	DHHD_AGE = 16, 17 (Member file) AND RELATIONSHIP = 51, 52, 53, 80, 100, 112, 123 (Relationship files)	Number of children aged 16 or 17 in a household whose relationship with at least one adult of the household is child, grandchild, child-in-law or, niece or nephew

3) Age and sex reference groupings - for Dietary Reference Intakes (DRIs)

Variable name: DHHDDDRI
Based on: DHHD_AGE, DHHD_SEX
Previous usage: This is a new derived variable.
Description: This variable indicates the age and sex groupings to be used for referencing the Dietary Reference Intakes (DRIs). DRIs are a set of scientifically based nutrient reference values to be used for planning and assessing the nutrient intakes of individuals and population groups. DRI values vary for men and women and for different age groups.
Note: More information about DRI definitions is available at website of Health Canada - Office of Nutrition Policy and Promotion (http://www.hc-sc.gc.ca/fn-an/nutrition/reference/index_e.html).

Value of DHHDDDRI	Condition(s)	Description
1	DHHD_AGE < 1	Age under 1
2	1 <= DHHD_AGE <= 3	Age between 1 and 3
3	4 <= DHHD_AGE <= 8	Age between 4 and 8
4	DHHD_SEX = 1 and 9 <= DHHD_AGE <= 13	Male, age between 9 and 13
5	DHHD_SEX = 2 and 9 <= DHHD_AGE <= 13	Female, age between 9 and 13
6	DHHD_SEX = 1 and 14 <= DHHD_AGE <= 18	Male, age between 14 and 18
7	DHHD_SEX = 2 and 14 <= DHHD_AGE <= 18	Female, age between 14 and 18
8	DHHD_SEX = 1 and 19 <= DHHD_AGE <= 30	Male, age between 19 and 30
9	DHHD_SEX = 2 and 19 <= DHHD_AGE <= 30	Female, age between 19 and 30
10	DHHD_SEX = 1 and 31 <= DHHD_AGE <= 50	Male, age between 31 and 50
11	DHHD_SEX = 2 and 31 <= DHHD_AGE <= 50	Female, age between 31 and 50
12	DHHD_SEX = 1 and 51 <= DHHD_AGE <= 70	Male, age between 51 and 70
13	DHHD_SEX = 2 and 51 <= DHHD_AGE <= 70	Female, age between 51 and 70
14	DHHD_SEX = 1 and DHHD_AGE >= 71	Male, age 71 and older
15	DHHD_SEX = 2 and DHHD_AGE >= 71	Female, age 71 and older

4) Household size

Variable name: DHHDDHSZ
Based on: Based on household roster, SAMPLEID, PERSONID
Previous usage:
CCHS 2.1 name: DHHCDHSZ
CCHS 1.2 name: DHHBDHSZ
CCHS 1.1 name: DHHADHSZ
NPHS Cycle 5 name: DHC2DHSZ
NPHS Cycle 4 name: DHC0DHSZ
NPHS Cycle 3 name: DHC8DHSZ
NPHS Cycle 2 name: DHC6DHSZ
NPHS Cycle 1 name: DHC4DHSZ *(formerly HHSIZE)*
Description: This variable indicates the number of people living within a household.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONIDs within each SAMPLEID.

Value of DHHDDHSZ	Condition(s)	Description
Total number of PERSONIDs with each SAMPLEID (values: 1-40)	Sort the file (Member file) by SAMPLEID and PERSONID	Number of persons in a household

5) Number of persons in household with age < 12

Variable name: DHHDDL12
Based on: SAMPLEID, PERSONID, DHHD_AGE
Previous usage:
CCHS 2.1 name: DHHCDL12
CCHS 1.2 name: DHHBDL12
CCHS 1.1 name: DHHADL12
NPHS Cycle 5 name: DHC2DL12
NPHS Cycle 4 name: DHC0DL12
NPHS Cycle 3 name: DHC8DL12
NPHS Cycle 2 name: DHC6DL12
NPHS Cycle 1 name: DHC4DL12 *(formerly NUMLT12)*
Description: This variable indicates the number of people living within a household whose age is less than 12 years old.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONIDs that have a DHHD_AGE value less than 12 within each SAMPLEID.

Value of DHHDDL12	Condition(s)	Description
Total number of PERSONIDs with each SAMPLEID (values: 0-40)	DHHD_AGE < 12 (MEMBER file)	Number of persons under 12 in a household

6) Number of persons in household with age <= 5

Variable name: DHHDDLE5
Based on: SAMPLEID, PERSONID, DHHD_AGE
Previous usage:
CCHS 2.1 name: DHHCDLE5
CCHS 1.2 name: DHHBDLE5
CCHS 1.1 name: DHHADLE5
NPHS Cycle 5 name: DHC2DLE5
NPHS Cycle 4 name: DHC0DLE5
NPHS Cycle 3 name: DHC8DLE5
NPHS Cycle 2 name: DHC6DLE5
NPHS Cycle 1 name: DHC4DLE5 *(formerly NUMLE5)*
Description: This variable indicates the number of people living within a household whose age is 5 years old or under.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONIDs that have a DHHD_AGE value of 5 and under within each SAMPLEID.

Value of DHHDDLE5	Condition(s)	Description
Total number of PERSONIDs with each SAMPLEID (values: 0-40)	DHHD_AGE <= 5 (Member file)	Number of persons aged 5 or under in a household

7) Number of persons in household with age 6 to 11

Variable name: DHHDD611
Based on: SAMPLEID, PERSONID, DHHD_AGE
Previous usage:
CCHS 2.1 name: DHHCD611
CCHS 1.2 name: DHHBD611
CCHS 1.1 name: DHHAD611
NPHS Cycle 5 name: DHC2D611
NPHS Cycle 4 name: DHC0D611
NPHS Cycle 3 name: DHC8D611
NPHS Cycle 2 name: DHC6D611
NPHS Cycle 1 name: DHC4D611 *(formerly NUM6TO11)*
Description: This variable indicates the number of people living within a household whose age is between 6 and 11 years old.
Note: This variable is derived by sorting the household roster dataset by SAMPLEID and PERSONID and by counting the number of PERSONIDs that have a DHHD_AGE value from 6 to 11 within each SAMPLEID.

Value of DHCDD611	Condition(s)	Description
Total number of PERSONIDs with each SAMPLEID (values: 0-40)	6 <= DHHD_AGE <= 11 (Member file)	Number of persons 6 to 11 in a household

8) Economic family status (household type)

Variable name: DHHDDECF
Based on: DHHD_REL for all PERSONID in SAMPLEID, DHHD_AGE, DHHD_SEX, DHHDDHSZ
Previous usage:
CCHS 2.1 name: DHHCDECF
CCHS 1.2 name: DHHBDECF
CCHS 1.1 name: DHHADECF
NPHS Cycle 5 name: DHC2DECF
NPHS Cycle 4 name: DHC0DECF
NPHS Cycle 3 name: DHC8DECF
NPHS Cycle 2 name: DHC6DECF
NPHS Cycle 1 name: DHC4DECF *(formerly DVECFM94)*
Description: This variable identifies the family relationships within the household.
Note: The necessary data is collected using a set of relationship codes that define a link between each person in a household. All relationships within each sample (relationship of each person in a household to each other person within that household) are used in creating this variable. The variable was based on the ages and reported relationships of each person to all others in the household. The matrix of relationship codes is not placed on the master file.

Temporary reformats

Condition(s)	Description
RELATIONSHIP CODES: (*as on the relationship file) **CODES** **CATEGORY** A0 Husband/wife B0 Common law partner C0 Same-sex partner D0 Parent, unspecified D1 Birth father/mother D2 Step father/mother D3 Adoptive father/mother E0 Child, unspecified E1 Birth child E2 Step child E3 Adopted child F0 Sister/brother, unspecified F1 Full sister/brother F2 Half sister/brother F3 Step sister/brother F4 Adopted sister/brother F5 Foster sister/brother G0 Foster parent H0 Foster child I0 Grandparent J0 Grandchild K0 In-law L0 Other related Y1 Single Z0 Unrelated ZZ, L8, L9 Not stated	Relationship codes used
A=(Parental) D0, D1, D2, D3 L=(Other) F0, F1, F2, F3, F4, F5*, G0*, H0*, I0, J0, K0, L0, Z0 M=(Child) E0, E1, E2, E3 (sorted by age) X=(Spouse) A0, B0, C0 Y=(Single) Y1 Z=(not stated) ZZ, L8, L9	Temporary recodes to collapse relationships

*All foster relationships (foster sister/brother, parent, or child) have been recoded into the “Other” relationship category due to the temporary nature of the relationships.

Value of DHHDDECF	Condition(s)	Description
99 (NS)	Any DHHD_REL = Z	Not Stated
1	DHHDDHSZ = 1	Unattached individual (Unattached individual living alone Household size = 1)
2	All DHHD_REL for all PERSONID in SAMPLEID in (L,Y)	Unattached individual living with others (Unattached individuals living together. There cannot be a marital/common-law or parental relationship but other relationships such as siblings are allowed)
3	DHHDDHSZ = 2 and DHHD_REL for both PERSONID in SAMPLEID = X	Couple alone (Married or C/L with no dependent children. No other relationships are permitted. Household size = 2)
4	DHHDDHSZ > 2 and at least 2 PERSONID in SAMPLEID must have an DHHD_REL = X and DHHD_REL for all PERSONID in SAMPLEID <> A and M	Couple with no dependent children, others (Married or C/L with no dependent children. There can be no parent/child relationships. Other relationships are permitted)
5	DHHDDHSZ > 2 and at least 2 PERSONID in SAMPLEID must have an DHHD_REL = X and at least one of which must have an DHHD_REL = A. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these at least one is DHHD_AGE < 25	Couple with children < 25 (Married or C/L couple with at least one partner being the parent of the dependent child. No other relationships are allowed)
6	DHHDDHSZ > 3 and At least 2 PERSONID in SAMPLEID must have an DHHD_REL = X and At least one of which must have an DHHD_REL = A. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these at least one is DHHD_AGE < 25	Couple with children < 25, others (At least one partner must be the parent of one child < 25 years old in the household. Other relationships are allowed)
7	DHHDDHSZ > 2 and at least 2 PERSONID in SAMPLEID must have an DHHD_REL = X and at least one of which must have an DHHD_REL = A. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these DHHD_AGE >= 25	Couple with all children >= 25 (Married or C/L couple with all children >= 25 years old. No other relationships are permitted.)

8	DHHDDHSZ > 3 and At least 2 PERSONID in SAMPLEID must have an DHHD_REL = X and at least one of which must have an DHHD_REL = A. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these DHHD_AGE >= 25	Couple with all children >= 25, others (Married or C/L couple with all children >= 25 years old. Any other relationships are allowed.)
9	DHHDDHSZ > 1 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 2. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these at least one DHHD_AGE < 25	Female lone parent with children < 25 (One child must be < 25 years old. No other relationships are permitted.)
10	DHHDDHSZ > 2 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 2. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these at least one DHHD_AGE < 25	Female lone parent with children < 25, others (One child must be < 25 years old. Other relationships are allowed.)
11	DHHDDHSZ > 1 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 2. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these DHHD_AGE >= 25	Female lone parent with all children >= 25 (All children must be >= 25 years old. No other relationships are permitted.)
12	DHHDDHSZ > 2 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 2. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these DHHD_AGE >= 25	Female lone parent with all children >= 25, others (All children must be >= 25 years old. Other relationships are allowed.)
13	DHHDDHSZ > 1 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 1. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these at least one DHHD_AGE < 25	Male lone parent with children < 25 (One child must be < 25 years old. No other relationships are permitted.)

14	DHHDDHSZ > 2 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 1. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these at least one DHHD_AGE < 25	Male lone parent with children < 25, others (One child must be < 25 years old. Other relationships are allowed.)
15	DHHDDHSZ > 1 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 1. All others PERSONID in SAMPLEID must have DHHD_REL = M and of these DHHD_AGE >= 25	Male lone parent with all children >= 25 (All children must be >= 25 years old. No other relationships are permitted.)
16	DHHDDHSZ > 2 and one PERSONID in SAMPLEID must have DHHD_REL = A and DHHD_SEX = 1. At least one other PERSONID in SAMPLEID must have DHHD_REL = M with the above PERSONID and of these DHHD_AGE >= 25	Male lone parent with all children >= 25, others (All children must be >= 25 years old. Other relationships are allowed.)
17	Else	Other family type (All other household types)

9) Living/family arrangement of selected respondent

Variable name: DHHDDLVG
Based on: DHHD_REL of selected respondent, DHHDDHSZ
Previous usage:
CCHS 2.1 name: DHHCDLVG
CCHS 1.2 name: DHHBDLVG
CCHS 1.1 name: DHHADLVG
NPHS Cycle 5 name: DHC2DLVG
NPHS Cycle 4 name: DHC0DLVG
NPHS Cycle 3 name: DHC8DLVG
NPHS Cycle 2 name: DHC6DLVG
NPHS Cycle 1 name: DHC4DLVG *(formerly DVLVNG94)*
Description: This variable identifies the family relationships between the selected respondent and the rest of the household.
Note: The necessary data is collected using a set of relationship codes that define a link between each person in a household. All relationships with the selected respondent within each sample (relationship of selected respondent to each other person within the household) are used in creating this variable.

Temporary reformats

Condition(s)		Description
RELATIONSHIP CODES: (*as on the relationship file)		
CODES	**CATEGORY**	
A0	Husband/wife	
B0	Common law partner	
C0	Same-sex partner	
D0	Parent, unspecified	
D1	Birth father/mother	
D2	Step father/mother	
D3	Adoptive father/mother	
E0	Child, unspecified	
E1	Birth child	
E2	Step child	
E3	Adopted child	
F0	Sister/brother, unspecified	Relationship codes used
F1	Full sister/brother	
F2	Half sister/brother	
F3	Step sister/brother	
F4	Adopted sister/brother	
F5	Foster sister/brother	
G0	Foster parent	
H0	Foster child	
I0	Grandparent	
J0	Grandchild	
K0	In-law	
L0	Other related	
Y1	Single	
Z0	Unrelated	
ZZ, L8, L9	Not stated	
A1=(Parental)	D0, D1, D2, D3	
B1=(Child)	E0, E1, E2, E3	
C1=(Sibling)	F0, F1, F2, F3, F4	
K1=(Other relative)	I0, J0, K0, L0	Temporary recodes to collapse relationships
L1= (Non-relative)	F5*, G0*, H0*, Z0	
X1=(Spouse/Partner)	A0, B0, C0	
Z1=(Not stated)	ZZ, L8, L9	

* All foster relationships (foster sister/brother, parent, or child) have been recoded into the “Non-relative” relationship category due to the temporary nature of the relationships.

Value of DHHDDLVG	Condition(s)	Description
99 (NS)	Any DHHD_REL = Z1	Not stated
1	DHHDDHSZ = 1	Unattached individual living alone (Lives alone. Household size = 1)
2	DHHDDHSZ > 1 and (no DHHD_REL = X1) and (no DHHD_REL = A1) and (no DHHD_REL = B1)	Unattached individual living with others (Lives with others. S/he cannot have a marital/common-law or parental relationship but other relationships such as siblings are allowed)
3	DHHDDHSZ = 2 and DHHD_REL = X1	Spouse/ partner living with spouse/partner (Lives with spouse/partner only. Household size = 2)
4	DHHDDHSZ > 2 and one DHHD_REL = X1 and all other DHHD_REL = A1	Parent living with spouse/ partner and children (Lives with spouse/partner and child(ren))
5	DHHDDHSZ > 1 and all DHHD_REL = A1	Single parent living with children (Lives with child(ren). No other relationships are permitted)
6	DHHDDHSZ = 2 and DHHD_REL = B1	Child living with single parent (Child living with a single parent. Household size = 2)
7	DHHDDHSZ > 2 and one DHHD_REL = B1 and all other DHHD_REL= C1	Child living with single parent and siblings (Child living with a single parent and siblings)
8	DHHDDHSZ = 3 and all DHHD_REL = B1	Child living with two parents (Child living with two parents. Household size = 3)
9	DHHDDHSZ > 3 and two DHHD_REL = B1 and all other DHHD_REL = C1	Child living with two parents and siblings (Child living with two parents and siblings)
10	Else	Other (Lives in a household composition not classified above)

10) Dwelling type

Variable name: DHHDDDWE
Based on: DHHD_DW1, DHHD_DW2 (not on the file)
Previous usage:
CCHS 2.1 name: DHHCDDWE
CCHS 1.2 name: DHHBDDWE
CCHS 1.1 name: DHHADDWE
Description: This variable indicates the type of dwelling the respondent lives in, according to the answer given either on the phone (DHHD_DW1) or face-to-face interviews (DHHD_DW2).

Value of DHHDDDWE	Condition(s)	Description
99 (NS)	(DHHD_DW1 = DK, R, NS) or (DHHD_DW2 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
1	(DHHD_DW1 = 1) or (DHHD_DW2 = 1)	Single detached
2	(DHHD_DW1 = 2) or (DHHD_DW2 = 2)	Double
3	(DHHD_DW1 = 3) or (DHHD_DW2 = 3)	Row or terrace
4	(DHHD_DW1 = 4) or (DHHD_DW2 = 4)	Duplex
5	(DHHD_DW1 = 5) or (DHHD_DW2 = 5)	Low-rise apartment (<5 stories) or flat
6	(DHHD_DW1 = 6) or (DHHD_DW2 = 6)	High-rise apartment (5 stories or more)
8	(DHHD_DW1 = 8) or (DHHD_DW2 = 8)	Hotel/ rooming house/ camp
9	(DHHD_DW1 = 9) or (DHHD_DW2 = 9)	Mobile home
10	(DHHD_DW1 = 10) or (DHHD_DW2 = 10)	Other

General Health (2 DVs)

1) Self-rated health

Variable name: GENDDHDI
Based on: GEND_01
Previous usage:
CCHS 2.1 name: GENCDHDI
CCHS 1.2 name: GENBDHDI
CCHS 1.1 name: GENADHDI
NPHS Cycle 5 name: GHC2DHDI
NPHS Cycle 4 name: GHC0DHDI
NPHS Cycle 3 name: GHC8DHDI
NPHS Cycle 2 name: GHC6DHDI
NPHS Cycle 1 name: GHC4DHDI *(formerly DVGHI94)*
Description: This variable indicates the respondent's health status based on his/her own judgement.
Note (1): Higher scores indicate positive self-reported health status.
Note (2): This variable applies to respondents aged 12 and over.

Value of GENDDHDI	Condition(s)	Description
6 (NA)	GEND_01 = NA	Population exclusion (respondents aged < 12)
9 (NS)	(GEND_01 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
0	GEND_01 = 5	Poor
1	GEND_01 = 4	Fair
2	GEND_01 = 3	Good
3	GEND_01 = 2	Very good
4	GEND_01 = 1	Excellent

2) Self-rated mental health

Variable name: GENDDMHI
Based on: GEND_02B
Previous usage:
CCHS 2.1 name: GENCDMHI
CCHS 1.2 name: SCRBDMEN
Description: This variable indicates the respondent's mental health status based on his/her own judgement.
Note (1): Higher scores indicate positive self-reported mental health status.
Note (2): This variable applies to respondents aged 12 and over.

Value of GENDDMHI	Condition(s)	Description
6 (NA)	GEND_01 = NA	Population exclusion (respondents aged < 12)
9 (NS)	(GEND_02B = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
0	GEND_02B = 5	Poor
1	GEND_02B = 4	Fair
2	GEND_02B = 3	Good
3	GEND_02B = 2	Very good
4	GEND_02B = 1	Excellent

Physical Activities (6 DVs)

1) Daily energy expenditure

Variable name: PACDDEE
Based on: PACD_1V, PACD_2A, PACD_2B, PACD_2C, PACD_2D, PACD_2E, PACD_2F, PACD_2G, PACD_2H, PACD_2I, PACD_2J, PACD_2K, PACD_2L, PACD_2M, PACD_2N, PACD_2O, PACD_2P, PACD_2Q, PACD_2R, PACD_2S, PACD_2T, PACD_2U, PACD_2W, PACD_2X, PACD_2Z, PACD_3A, PACD_3B, PACD_3C, PACD_3D, PACD_3E, PACD_3F, PACD_3G, PACD_3H, PACD_3I, PACD_3J, PACD_3K, PACD_3L, PACD_3M, PACD_3N, PACD_3O, PACD_3P, PACD_3Q, PACD_3R, PACD_3S, PACD_3T, PACD_3U, PACD_3W, PACD_3X, PACD_3Z
Previous usage:
CCHS 2.1 name: PACCDEE
CCHS 1.2 name: PACBDEE
CCHS 1.1 name: PACADEE
NPHS Cycle 5 name: PAC2DEE
NPHS Cycle 4 name: PAC0DEE
NPHS Cycle 3 name: PAC8DEE
NPHS Cycle 2 name: PAC6DEE
NPHS Cycle 1 name: PAC4DEE (formerly DVEE94)
Description: This variable is a measure of the average daily energy expended during leisure time activities by the respondent in the past three months.
Note (1): This variable applies to respondents aged 12 and over.
Note (2): Energy Expenditure is calculated using the frequency and duration per session of the physical activity as well as the MET value of the activity. The MET is a value of metabolic energy cost expressed as a multiple of the resting metabolic rate. For example, an activity of 4 METS requires four times the amount of energy as compared to when the body is at rest.

EE (Energy Expenditure for each activity) = (N X D X METvalue) / 365

Where:
N = the number of times a respondent engaged in an activity over a 12 month period
D = the average duration in hours of the activity
MET value = the energy cost of the activity expressed as kilocalories expended per kilogram of body weight per hour of activity (kcal/kg per hour)/365 (to convert yearly data into daily data)

MET values tend to be expressed in three intensity levels (i.e. low, medium, high). The CCHS questions did not ask the respondent to specify the intensity level of their activities. Therefore the MET values adopted correspond to the low intensity value of each activity. This approach is adopted from the Canadian Fitness and Lifestyle Research Institute because individuals tend to overestimate the intensity, frequency and duration of their activities.

Internet site: Canadian Fitness and Lifestyle Research Institute: www.cflri.ca

The MET values for the CCHS questions are:

Variable name	Activity	MET Value (kcal/kg/hr)
PACDDEEA	WALKING FOR EXERCISE	3
PACDDEEB	GARDENING OR YARD WORK	3
PACDDEEC	SWIMMING	3
PACDDEED	BICYCLING	4
PACDDEEE	POPULAR OR SOCIAL DANCE	3
PACDDEEF	HOME EXERCISES	3
PACDDEEG	ICE HOCKEY	6
PACDDEEH	ICE SKATING	4
PACDDEEI	IN-LINE SKATING OR ROLLERBLADING	5
PACDDEEJ	JOGGING OR RUNNING*	9.5
PACDDEEK	GOLFING	4
PACDDEEL	EXERCISE CLASS OR AEROBICS	4
PACDDEEM	DOWNHILL SKIING OR SNOWBOARDING	4
PACDDEEN	BOWLING	2
PACDDEEO	BASEBALL OR SOFTBALL	3
PACDDEEP	TENNIS	4
PACDDEEQ	WEIGHT-TRAINING	3
PACDDEER	FISHING	3
PACDDEES	VOLLEYBALL	5
PACDDEET	BASKETBALL	6
PACDDEEZ	SOCCER	5
PACDDEEU	OTHER (U)*	4
PACDDEEW	OTHER (W)*	4
PACDDEEX	OTHER (X)*	4

* Jogging (MET value 7) and running (MET value 12) fall under one category. Therefore, the MET value for the combined activity is the average of their MET values (9.5). Since it is difficult to assign a MET value to the category "**Other Activities**", the MET value used is the average of the listed activities except for the average value of jogging and running. Here, the average value of jogging and running is replaced by the value for jogging only. Some activities have MET values lower than the average, however, this approach is consistent with other studies, such as the Campbell's Survey and the Ontario Health Survey (OHS).

Calculate EE values for each activity

WALKING FOR EXERCISE:

Value of PACDDEEA	Condition(s)	Description
0	PACD_3A = NA	Did not participate in activity
0	(PACD_3A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2A × 4 × .2167 × 3) / 365	PACD_3A = 1	Calculate EE for < 15 min*
(PACD_2A × 4 × .3833 × 3) / 365	PACD_3A = 2	Calculate EE for 16 to 30 min*
(PACD_2A × 4 × .75 × 3) / 365	PACD_3A = 3	Calculate EE for 31 to 60 min*
(PACD_2A × 4 × 1 × 3) / 365	PACD_3A = 4	Calculate EE for > 60 min*

GARDENING OR YARD WORK:

Value of PACDDEEB	Condition(s)	Description
0	PACD_3B = NA	Did not participate in activity
0	(PACD_3B = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2B × 4 × .2167 × 3) / 365	PACD_3B = 1	Calculate EE for < 15 min*
(PACD_2B × 4 × .3833 × 3) / 365	PACD_3B = 2	Calculate EE for 16 to 30 min*
(PACD_2B × 4 × .75 × 3) / 365	PACD_3B = 3	Calculate EE for 31 to 60 min*
(PACD_2B × 4 × 1 × 3) / 365	PACD_3B = 4	Calculate EE for > 60 min*

SWIMMING:

Value of PACDDEEC	Condition(s)	Description
0	PACD_3C = NA	Did not participate in activity
0	(PACD_3C = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2C × 4 × .2167 × 3) / 365	PACD_3C = 1	Calculate EE for < 15 min*
(PACD_2C × 4 × .3833 × 3) / 365	PACD_3C = 2	Calculate EE for 16 to 30 min*
(PACD_2C × 4 × .75 × 3) / 365	PACD_3C = 3	Calculate EE for 31 to 60 min*
(PACD_2C × 4 × 1 × 3) / 365	PACD_3C = 4	Calculate EE for > 60 min*

BICYCLING:

Value of PACDDEED	Condition(s)	Description
0	PACD_3D = NA	Did not participate in activity
0	(PACD_3D = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2D × 4 × .2167 × 4) / 365	PACD_3D = 1	Calculate EE for < 15 min*
(PACD_2D × 4 × .3833 × 4) / 365	PACD_3D = 2	Calculate EE for 16 to 30 min*
(PACD_2D × 4 × .75 × 4) / 365	PACD_3D = 3	Calculate EE for 31 to 60 min*
(PACD_2D × 4 × 1 × 4) / 365	PACD_3D = 4	Calculate EE for > 60 min*

POPULAR OR SOCIAL DANCE:

Value of PACDDEEE	Condition(s)	Description
0	PACD_3E = NA	Did not participate in activity
0	(PACD_3E = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2E × 4 × .2167 × 3) / 365	PACD_3E = 1	Calculate EE for < 15 min*
(PACD_2E × 4 × .3833 × 3) / 365	PACD_3E = 2	Calculate EE for 16 to 30 min*
(PACD_2E × 4 × .75 × 3) / 365	PACD_3E = 3	Calculate EE for 31 to 60 min*
(PACD_2E × 4 × 1 × 3) / 365	PACD_3E = 4	Calculate EE for > 60 min*

HOME EXERCISES:

Value of PACDDEEF	Condition(s)	Description
0	PACD_3F = NA	Did not participate in activity
0	(PACD_3F = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2F × 4 × .2167 × 3) / 365	PACD_3F = 1	Calculate EE for < 15 min*

(PACD_2F × 4 × .3833 × 3) / 365	PACD_3F = 2	Calculate EE for 16 to 30 min*
(PACD_2F × 4 × .75 × 3) / 365	PACD_3F = 3	Calculate EE for 31 to 60 min*
(PACD_2F × 4 × 1 × 3) / 365	PACD_3F = 4	Calculate EE for > 60 min*

ICE HOCKEY:

Value of PACDDEEG	Condition(s)	Description
0	PACD_3G = NA	Did not participate in activity
0	(PACD_3G = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2G × 4 × .2167 × 6) / 365	PACD_3G = 1	Calculate EE for < 15 min*
(PACD_2G × 4 × .3833 × 6) / 365	PACD_3G = 2	Calculate EE for 16 to 30 min*
(PACD_2G × 4 × .75 × 6) / 365	PACD_3G = 3	Calculate EE for 31 to 60 min*
(PACD_2G × 4 × 1 × 6) / 365	PACD_3G = 4	Calculate EE for > 60 min*

ICE SKATING:

Value of PACDDEEH	Condition(s)	Description
0	PACD_3H = NA	Did not participate in activity
0	(PACD_3H = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2H × 4 × .2167 × 4) / 365	PACD_3H = 1	Calculate EE for < 15 min*
(PACD_2H × 4 × .3833 × 4) / 365	PACD_3H = 2	Calculate EE for 16 to 30 min*
(PACD_2H × 4 × .75 × 4) / 365	PACD_3H = 3	Calculate EE for 31 to 60 min*
(PACD_2H × 4 × 1 × 4) / 365	PACD_3H = 4	Calculate EE for > 60 min*

IN-LINE SKATING OR ROLLERBLADING:

Value of PACDDEEI	Condition(s)	Description
0	PACD_3I = NA	Did not participate in activity
0	(PACD_3I = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2I × 4 × .2167 × 5) / 365	PACD_3I = 1	Calculate EE for < 15 min*
(PACD_2I × 4 × .3833 × 5) / 365	PACD_3I = 2	Calculate EE for 16 to 30 min*
(PACD_2I × 4 × .75 × 5) / 365	PACD_3I = 3	Calculate EE for 31 to 60 min*
(PACD_2I × 4 × 1 × 5) / 365	PACD_3I = 4	Calculate EE for > 60 min*

JOGGING OR RUNNING:

Value of PACDDEEJ	Condition(s)	Description
0	PACD_3J = NA	Did not participate in activity
0	(PACD_3J = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2J × 4 × .2167 × 9.5) / 365	PACD_3J = 1	Calculate EE for < 15 min*
(PACD_2J × 4 × .3833 × 9.5) / 365	PACD_3J = 2	Calculate EE for 16 to 30 min*
(PACD_2J × 4 × .75 × 9.5) / 365	PACD_3J = 3	Calculate EE for 31 to 60 min*
(PACD_2J × 4 × 1 × 9.5) / 365	PACD_3J = 4	Calculate EE for > 60 min*

GOLFING:

Value of PACDDEEK	Condition(s)	Description
0	PACD_3K = NA	Did not participate in activity
0	(PACD_3K = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2K × 4 × .2167 × 4) / 365	PACD_3K = 1	Calculate EE for < 15 min*
(PACD_2K × 4 × .3833 × 4) / 365	PACD_3K = 2	Calculate EE for 16 to 30 min*
(PACD_2K × 4 × .75 × 4) / 365	PACD_3K = 3	Calculate EE for 31 to 60 min*
(PACD_2K × 4 × 1 × 4) / 365	PACD_3K = 4	Calculate EE for > 60 min*

EXERCISE CLASS OR AEROBICS:

Value of PACDDEEL	Condition(s)	Description
0	PACD_3L = NA	Did not participate in activity
0	(PACD_3L = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2L × 4 × .2167 × 4) / 365	PACD_3L = 1	Calculate EE for < 15 min*
(PACD_2L × 4 × .3833 × 4) / 365	PACD_3L = 2	Calculate EE for 16 to 30 min*
(PACD_2L × 4 × .75 × 4) / 365	PACD_3L = 3	Calculate EE for 31 to 60 min*
(PACD_2L × 4 × 1 × 4) / 365	PACD_3L = 4	Calculate EE for > 60 min*

DOWNHILL SKIING OR SNOWBOARDING:

Value of PACDDEEM	Condition(s)	Description
0	PACD_3M = NA	Did not participate in activity
0	(PACD_3M = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2M × 4 × .2167 × 4) / 365	PACD_3M = 1	Calculate EE for < 15 min*
(PACD_2M × 4 × .3833 × 4) / 365	PACD_3M = 2	Calculate EE for 16 to 30 min*
(PACD_2M × 4 × .75 × 4) / 365	PACD_3M = 3	Calculate EE for 31 to 60 min*
(PACD_2M × 4 × 1 × 4) / 365	PACD_3M = 4	Calculate EE for > 60 min*

BOWLING:

Value of PACDDEEN	Condition(s)	Description
0	PACD_3N = NA	Did not participate in activity
0	(PACD_3N = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2N × 4 × .2167 × 2) / 365	PACD_3N = 1	Calculate EE for < 15 min*
(PACD_2N × 4 × .3833 × 2) / 365	PACD_3N = 2	Calculate EE for 16 to 30 min*
(PACD_2N × 4 × .75 × 2) / 365	PACD_3N = 3	Calculate EE for 31 to 60 min*
(PACD_2N × 4 × 1 × 2) / 365	PACD_3N = 4	Calculate EE for > 60 min*

BASEBALL OR SOFTBALL:

Value of PACDDEEO	Condition(s)	Description
0	PACD_3O = NA	Did not participate in activity
0	(PACD_3O = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2O × 4 × .2167 × 3) / 365	PACD_3O = 1	Calculate EE for < 15 min*

(PACD_2O × 4 × .3833 × 3) / 365	PACD_3O = 2	Calculate EE for 16 to 30 min*
(PACD_2O × 4 × .75 × 3) / 365	PACD_3O = 3	Calculate EE for 31 to 60 min*
(PACD_2O × 4 × 1 × 3) / 365	PACD_3O = 4	Calculate EE for > 60 min*

TENNIS:

Value of PACDDEEP	Condition(s)	Description
0	PACD_3P = NA	Did not participate in activity
0	(PACD_3P = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2P × 4 × .2167 × 4) / 365	PACD_3P = 1	Calculate EE for < 15 min*
(PACD_2P × 4 × .3833 × 4) / 365	PACD_3P = 2	Calculate EE for 16 to 30 min*
(PACD_2P × 4 × .75 × 4) / 365	PACD_3P = 3	Calculate EE for 31 to 60 min*
(PACD_2P × 4 × 1 × 4) / 365	PACD_3P = 4	Calculate EE for > 60 min*

WEIGHT-TRAINING:

Value of PACDDEEQ	Condition(s)	Description
0	PACD_3Q = NA	Did not participate in activity
0	(PACD_3Q = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2Q × 4 × .2167 × 3) / 365	PACD_3Q = 1	Calculate EE for < 15 min*
(PACD_2Q × 4 × .3833 × 3) / 365	PACD_3Q = 2	Calculate EE for 16 to 30 min*
(PACD_2Q × 4 × .75 × 3) / 365	PACD_3Q = 3	Calculate EE for 31 to 60 min*
(PACD_2Q × 4 × 1 × 3) / 365	PACD_3Q = 4	Calculate EE for > 60 min*

FISHING:

Value of PACDDEER	Condition(s)	Description
0	PACD_3R = NA	Did not participate in activity
0	(PACD_3R = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2R × 4 × .2167 × 3) / 365	PACD_3R = 1	Calculate EE for < 15 min*
(PACD_2R × 4 × .3833 × 3) / 365	PACD_3R = 2	Calculate EE for 16 to 30 min*
(PACD_2R × 4 × .75 × 3) / 365	PACD_3R = 3	Calculate EE for 31 to 60 min*
(PACD_2R × 4 × 1 × 3) / 365	PACD_3R = 4	Calculate EE for > 60 min*

VOLLEYBALL:

Value of PACDDEES	Condition(s)	Description
0	PACD_3S = NA	Did not participate in activity
0	(PACD_3S = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2S × 4 × .2167 × 5) / 365	PACD_3S = 1	Calculate EE for < 15 min*
(PACD_2S × 4 × .3833 × 5) / 365	PACD_3S = 2	Calculate EE for 16 to 30 min*
(PACD_2S × 4 × .75 × 5) / 365	PACD_3S = 3	Calculate EE for 31 to 60 min*
(PACD_2S × 4 × 1 × 5) / 365	PACD_3S = 4	Calculate EE for > 60 min*

BASKETBALL:

Value of PACDDEET	Condition(s)	Description
0	PACD_3T = NA	Did not participate in activity
0	(PACD_3T = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2T × 4 × .2167 × 6) / 365	PACD_3T = 1	Calculate EE for < 15 min*
(PACD_2T × 4 × .3833 × 6) / 365	PACD_3T = 2	Calculate EE for 16 to 30 min*
(PACD_2T × 4 × .75 × 6) / 365	PACD_3T = 3	Calculate EE for 31 to 60 min*
(PACD_2T × 4 × 1 × 6) / 365	PACD_3T = 4	Calculate EE for > 60 min*

SOCCER (Z):

Value of PACDDEEZ	Condition(s)	Description
0	PACD_3Z = NA	Did not participate in activity
0	(PACD_3Z = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2Z × 4 × .2167 × 5) / 365	PACD_3Z = 1	Calculate EE for < 15 min*
(PACD_2Z × 4 × .3833 × 5) / 365	PACD_3Z = 2	Calculate EE for 16 to 30 min*
(PACD_2Z × 4 × .75 × 5) / 365	PACD_3Z = 3	Calculate EE for 31 to 60 min*
(PACD_2Z × 4 × 1 × 5) / 365	PACD_3Z = 4	Calculate EE for > 60 min*

OTHER (U):

Value of PACDDEEU	Condition(s)	Description
0	PACD_3U = NA	Did not participate in activity
0	(PACD_3U = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2U × 4 × .2167 × 4) / 365	PACD_3U = 1	Calculate EE for < 15 min*
(PACD_2U × 4 × .3833 × 4) / 365	PACD_3U = 2	Calculate EE for 16 to 30 min*
(PACD_2U × 4 × .75 × 4) / 365	PACD_3U = 3	Calculate EE for 31 to 60 min*
(PACD_2U × 4 × 1 × 4) / 365	PACD_3U = 4	Calculate EE for > 60 min*

OTHER (W):

Value of PACDDEEW	Condition(s)	Description
0	PACD_3W = NA	Did not participate in activity
0	(PACD_3W = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2W × 4 × .2167 × 4) / 365	PACD_3W = 1	Calculate EE for < 15 min*
(PACD_2W × 4 × .3833 × 4) / 365	PACD_3W = 2	Calculate EE for 16 to 30 min*
(PACD_2W × 4 × .75 × 4) / 365	PACD_3W = 3	Calculate EE for 31 to 60 min*
(PACD_2W × 4 × 1 × 4) / 365	PACD_3W = 4	Calculate EE for > 60 min*

OTHER (X):

Value of PACDDEEX	Condition(s)	Description
0	PACD_3X = NA	Did not participate in activity
0	(PACD_3X = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACD_2X × 4 × .2167 × 4) / 365	PACD_3X = 1	Calculate EE for < 15 min*

(PACD_2X × 4 × .3833 × 4) / 365	PACD_3X = 2	Calculate EE for 16 to 30 min*
(PACD_2X × 4 × .75 × 4) / 365	PACD_3X = 3	Calculate EE for 31 to 60 min*
(PACD_2X × 4 × 1 × 4) / 365	PACD_3X = 4	Calculate EE for > 60 min*

* Times were assigned an average duration value for the calculation, as with NPHS:
(13 minutes or .2167 hour, 23 minutes or .3833 hour, 45 minutes or .75 hour, 60 minutes or 1 hour)

Beginning in CCHS cycle 2.1, the list of activities (PACD_1n) has changed slightly from previous CCHS cycles: The activity "Soccer" was asked explicitly in Cycle 2.1. For 1.1 and 1.2, this activity was part of the "Other" activities.

For NPHS, the list of activities has changed slightly since Cycle 1: "Skating" was changed to "Ice-skating" starting in Cycle 2. "In-line skating or roller-blading" was added starting in Cycle 3. "Yoga or tai-chi" was dropped after Cycle 1 and "Basketball" was added. "Cross-country skiing" was on the list for Cycles 1 and 2 only. "Soccer" is not asked on NPHS.

TOTAL:

Value of PACDDEE	Condition(s)	Description
99.6 (NA)	PACD_1V = NA	Population exclusion
99.9 (NS)	(PACD_1V = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
0	PACD_1V = 1	No physical activity
PACDDEEA + PACDDEEB + PACDDEEC + PACDDEED + PACDDEEE + PACDDEEF + PACDDEEG + PACDDEEH + PACDDEEI + PACDDEEJ + PACDDEEK + PACDDEEL + PACDDEEM + PACDDEEN + PACDDEEO + PACDDEEP + PACDDEEQ + PACDDEER + PACDDEES + PACDDEET + PACDDEEZ + PACDDEEU + PACDDEEW + PACDDEEX (rounded to one decimal place) (min: 0.0; max: 99.5)	(0 <= PACDDEEA < NA) and (0 <= PACDDEEB < NA) and (0 <= PACDDEEC < NA) and (0 <= PACDDEED < NA) and (0 <= PACDDEEE < NA) and (0 <= PACDDEEF < NA) and (0 <= PACDDEEG < NA) and (0 <= PACDDEEH < NA) and (0 <= PACDDEEI < NA) and (0 <= PACDDEEJ < NA) and (0 <= PACDDEEK < NA) and (0 <= PACDDEEL < NA) and (0 <= PACDDEEM < NA) and (0 <= PACDDEEN < NA) and (0 <= PACDDEEO < NA) and (0 <= PACDDEEP < NA) and (0 <= PACDDEEQ < NA) and (0 <= PACDDEER < NA) and (0 <= PACDDEES < NA) and (0 <= PACDDEET < NA) and (0 <= PACDDEEZ < NA) and (0 <= PACDDEEU < NA) and (0 <= PACDDEEW < NA) and (0 <= PACDDEEX < NA)	Total daily energy expenditure (kcal/kg/day)

2) Participant in leisure physical activity

Variable name: PACDFLEI
Based on: PACD_1V
Previous usage:
CCHS 2.1 name: PACCFLEI
CCHS 1.2 name: PACBFLEI
CCHS 1.1 name: PACAFLEI
NPHS Cycle 5 name: PAC2DLEI
NPHS Cycle 4 name: PAC0DLEI
NPHS Cycle 3 name: PAC8DLEI
NPHS Cycle 2 name: PAC6DLEI
NPHS Cycle 1 name: PAC4DLEI *(formerly DVPART94)*
Description: This variable indicates whether the respondent participated in any leisure physical activities in the three months prior to the interview.
Source: Ontario Health Survey
Note: This variable applies to respondents aged 12 and over.

Value of PACDFLEI	Condition(s)	Description
6 (NA)	PACD_1V = NA	Population exclusion
9 (NS)	(PACD_1V = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
2	PACD_1V = 1	Does not participate in leisure physical activity
1	PACD_1V = 2	Participates in leisure physical activity

3) Average monthly frequency of physical activity lasting over 15 minutes

Variable name: PACDDFM
Based on: PACD_1V, PACD_2A, PACD_2B, PACD_2C, PACD_2D, PACD_2E, PACD_2F, PACD_2G, PACD_2H, PACD_2I, PACD_2J, PACD_2K, PACD_2L, PACD_2M, PACD_2N, PACD_2O, PACD_2P, PACD_2Q, PACD_2R, PACD_2S, PACD_2T, PACD_2Z, PACD_2U, PACD_2W, PACD_2X, PACD_3A, PACD_3B, PACD_3C, PACD_3D, PACD_3E, PACD_3F, PACD_3G, PACD_3H, PACD_3I, PACD_3J, PACD_3K, PACD_3L, PACD_3M, PACD_3N, PACD_3O, PACD_3P, PACD_3Q, PACD_3R, PACD_3S, PACD_3T, PACD_3Z, PACD_3U, PACD_3W, PACD_3X
Previous usage:
CCHS 2.1 name: PACCDFM
CCHS 1.2 name: PACBDFM
CCHS 1.1 name: PACADFM
NPHS Cycle 5 name: PAC2DFM
NPHS Cycle 4 name: PAC0DFM
NPHS Cycle 3 name: PAC8DFM
NPHS Cycle 2 name: PAC6DFM
NPHS Cycle 1 name: PAC4DFM *(formerly DVMOFQ94)*
Description: This variable measures the total <u>number of times per month</u> that respondents took part in a physical activity(ies) lasting more than 15 minutes.
Note (1): This variable applies to respondents aged 12 and over.
Note (2): The survey questions refer to "the past three months". This variable calculates a one-month average by dividing the total reported frequency by three.
Source: Ontario Health Survey

Temporary reformats

Condition(s)	Action

If (PACD_3A = 1, NA, DK, R, NS) then PACDT2A = 0
If (PACD_3B = 1, NA, DK, R, NS) then PACDT2B = 0
If (PACD_3C = 1, NA, DK, R, NS) then PACDT2C = 0
If (PACD_3D = 1, NA, DK, R, NS) then PACDT2D = 0
If (PACD_3E = 1, NA, DK, R, NS) then PACDT2E = 0
If (PACD_3F = 1, NA, DK, R, NS) then PACDT2F = 0
If (PACD_3G = 1, NA, DK, R, NS) then PACDT2G = 0
If (PACD_3H = 1, NA, DK, R, NS) then PACDT2H = 0
If (PACD_3I = 1, NA, DK, R, NS) then PACDT2I = 0
If (PACD_3J = 1, NA, DK, R, NS) then PACDT2J = 0
If (PACD_3K = 1, NA, DK, R, NS) then PACDT2K = 0
If (PACD_3L = 1, NA, DK, R, NS) then PACDT2L = 0
If (PACD_3M = 1, NA, DK, R, NS) then PACDT2M = 0
If (PACD_3N = 1, NA, DK, R, NS) then PACDT2N = 0
If (PACD_3O = 1, NA, DK, R, NS) then PACDT2O = 0
If (PACD_3P = 1, NA, DK, R, NS) then PACDT2P = 0
If (PACD_3Q = 1, NA, DK, R, NS) then PACDT2Q = 0
If (PACD_3R = 1, NA, DK, R, NS) then PACDT2R = 0
If (PACD_3S = 1, NA, DK, R, NS) then PACDT2S = 0
If (PACD_3T = 1, NA, DK, R, NS) then PACDT2T = 0
If (PACD_3Z = 1, NA, DK, R, NS) then PACDT2Z = 0
If (PACD_3U = 1, NA, DK, R, NS) then PACDT2U = 0
If (PACD_3W = 1, NA, DK, R, NS) then PACDT2W = 0
If (PACD_3X = 1, NA, DK, R, NS) then PACDT2X = 0
	Set all values for PACD_2n (number of times/3months respondents did physical activity) to 0 if PACD_3n is 1 (1 to 15 minutes), NA (did not participate in activity), or DK, R, NS (did not answer question)

Value of PACDDFM	Condition(s)	Description
996 (NA)	PACD_1V = NA	Population exclusion
0	PACD_1V=1	No physical activity
999 (NS)	(PACD_1V = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
(PACDT2A + PACDT2B + PACDT2C + PACDT2D + PACDT2E + PACDT2F + PACDT2G + PACDT2H + PACDT2I + PACDT2J + PACDT2K + PACDT2L + PACDT2M + PACDT2N + PACDT2O + PACDT2P + PACDT2Q + PACDT2R + PACDT2S + PACDT2T + PACDT2Z + PACDT2U + PACDT2W + PACDT2X) / 3 (rounded to nearest whole number) (min: 0; max: 995)	(0 <= PACDT2A < NA) and (0 <= PACDT2B < NA) and (0 <= PACDT2C < NA) and (0 <= PACDT2D < NA) and (0 <= PACDT2E < NA) and (0 <= PACDT2F < NA) and (0 <= PACDT2G < NA) and (0 <= PACDT2H < NA) and (0 <= PACDT2I < NA) and (0 <= PACDT2J < NA) and (0 <= PACDT2K < NA) and (0 <= PACDT2L < NA) and (0 <= PACDT2M < NA) and (0 <= PACDT2N < NA) and (0 <= PACDT2O < NA) and (0 <= PACDT2P < NA) and (0 <= PACDT2Q < NA) and (0 <= PACDT2R <NA) and (0 <= PACDT2S < NA) and (0 <= PACDT2T < NA) and (0 <= PACDT2Z < NA) and (0 <= PACDT2U < NA) and (0 <= PACDT2W < NA) and (0 <= PACDT2X < NA)	Monthly frequency of all physical activity lasting over 15 minutes

4) Frequency of all physical activity lasting over 15 minutes

Variable name: PACDDFR
Based on: PACDDFM
Previous usage:
CCHS 2.1 name: PACCDFR
CCHS 1.2 name: PACBDFR
CCHS 1.1 name: PACADFR
NPHS Cycle 5 name: PAC2DFR
NPHS Cycle 4 name: PAC0DFR
NPHS Cycle 3 name: PAC8DFR
NPHS Cycle 2 name: PAC6DFR
NPHS Cycle 1 name: PAC4DFR *(formerly DVPAFQ94)*
Description: This variable classifies respondents according to their pattern, or regularity of physical activity lasting more than 15 minutes.
Note (1): This variable applies to respondents aged 12 and over.
Note (2): This variable uses values for the derived variable Monthly Frequency of Physical Activity (PACDDFM). The values for PACDDFM reflect a one-month average based on data reported for a three-month period.

Value of PACDDFR	Condition(s)	Description
6 (NA)	PACDDFM = NA	Population exclusion
9 (NS)	PACDDFM = NS	Required question was not answered (don't know, refusal, not stated)
1	(12 <= PACDDFM < NA)	Regular practice of activities
2	(4 <= PACDDFM < 12)	Occasional practice of activities
3	PACDDFM < 4	Infrequent practice of activities

5) Participant in daily physical activity lasting over 15 minutes

Variable name: PACDFD
Based on: PACDDFM
Previous usage:
CCHS 2.1 name: PACCFD
CCHS 1.2 name: PACBFD
CCHS 1.1 name: PACAFD
NPHS Cycle 5 name: PAC2DFD
NPHS Cycle 4 name: PAC0DFD
NPHS Cycle 3 name: PAC8DFD
NPHS Cycle 2 name: PAC6DFD
NPHS Cycle 1 name: PAC4DFD *(formerly DVDAFQ94)*
Description: This variable indicates whether the respondent participated daily in physical activity lasting over 15 minutes.
Note (1): This variable applies to respondents aged 12 and over.
Note (2): This variable is based on values for Monthly Frequency of Physical Activity (PACDDFM). Values for PACDDFM reflect a one-month average based on data reported for a three-month period.

Value of PACDFD	Condition(s)	Description
6 (NA)	PACDDFM = NA	Population exclusion
9 (NS)	PACDDFM = NS	Required question was not answered (don't know, refusal, not stated)
1	(30 <= PACDDFM < NA)	Participates in daily physical activity
2	PACDDFM < 30	Does not participate in daily physical activity

6) Physical activity index

Variable name: PACDDPAI
Based on: PACDDEE
Previous usage:
CCHS 2.1 name: PACCDPAI
CCHS 1.2 name: PACBDPAI
CCHS 1.1 name: PACADPAI
NPHS Cycle 5 name: PAC2DPAI
NPHS Cycle 4 name: PAC0DPAI
NPHS Cycle 3 name: PAC8DPAI
NPHS Cycle 2 name: PAC6DPAI
NPHS Cycle 1 name: PAC4DPAI *(formerly DVPAID94)*
Description: This variable categorizes respondents as being "active", "moderate", or "inactive" based on the total daily Energy Expenditure values (kcal/kg/day) calculated for PACDDEE.
Note (1): This variable applies to respondents aged 12 and over.

Note (2): The Physical Activity Index follows the same criteria used to categorize individuals in the Ontario Health Survey (OHS) and in the Campbell's Survey on Well Being.
Internet site: Campbell Survey on Well-Being in Canada: www.cflri.ca/cflri/pa/surveys/88survey.html

Value of PACDDPAI	Condition(s)	Description
6 (NA)	PACDDEE = NA	Population exclusion
9 (NS)	PACDDEE = NS	Required question was not answered (don't know, refusal, not stated)
1	(3 <= PACDDEE < NA)	Active
2	(1.5 <= PACDDEE < 3.0)	Moderate
3	(0 <= PACDDEE < 1.5)	Inactive

Sedentary Activities (2 DVs)

Temporary reformats:

Condition(s)	Description
If SACD_1 = 1 then SACDT1 = 0 If SACD_1 = 2 then SACDT1 = 0.5 If SACD_1 = 3 then SACDT1 = 1.5 If SACD_1 = 4 then SACDT1 = 4 If SACD_1 = 5 then SACDT1 = 8 If SACD_1 = 6 then SACDT1 = 12.5 If SACD_1 = 7 then SACDT1 = 17.5 If SACD_1 = 8 then SACDT1 = 20	Recode to midpoint of response ranges
If SACD_2 = 1 then SACDT2 = 0 If SACD_2 = 2 then SACDT2 = 0.5 If SACD_2 = 3 then SACDT2 = 1.5 If SACD_2 = 4 then SACDT2 = 4 If SACD_2 = 5 then SACDT2 = 8 If SACD_2 = 6 then SACDT2 = 12.5 If SACD_2 = 7 then SACDT2 = 17.5 If SACD_2 = 8 then SACDT2 = 20	Recode to midpoint of response ranges
If SACD_3 = 1 then SACDT3 = 0 If SACD_3 = 2 then SACDT3 = 0.5 If SACD_3 = 3 then SACDT3 = 1.5 If SACD_3 = 4 then SACDT3 = 4 If SACD_3 = 5 then SACDT3 = 8 If SACD_3 = 6 then SACDT3 = 12.5 If SACD_3 = 7 then SACDT3 = 17.5 If SACD_3 = 8 then SACDT3 = 20	Recode to midpoint of response ranges
If SACD_4 = 1 then SACDT4 = 0 If SACD_4 = 2 then SACDT4 = 0.5 If SACD_4 = 3 then SACDT4 = 1.5 If SACD_4 = 4 then SACDT4 = 4 If SACD_4 = 5 then SACDT4 = 8 If SACD_4 = 6 then SACDT4 = 12.5 If SACD_4 = 7 then SACDT4 = 17.5 If SACD_4 = 8 then SACDT4 = 20	Recode to midpoint of response ranges

1) Total number of hours per week spent in sedentary activities (including reading)

Variable name: SACDDTOT
Based on: SACD_1, SACD_2, SACD_3, SACD_4
Previous usage:
CCHS 2.1 name: SACCDTOT
CCHS 1.1 name: SACADTOT
Description: This variable estimates the total number of hours the respondent spent in a typical week in the past three months in sedentary activities including playing computer games, using the Internet, playing video games (e.g. Nintendo, Play station), watching television or video, and reading. For all activities, the time spent at school or work is excluded.
Note: This variable applies to youth aged 12 to 17.

Temporary variable SAC

Value of SAC	Condition(s)	Description
96 (NA)	SACDT1 = NA	Population exclusion
99 (NS)	(SACDT1 = DK, R, NS) or (SACDT2 = DK, R, NS) or (SACDT3 = DK, R, NS) or (SACDT4 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
SACDT1 + SACDT2 + SACDT3 + SACDT4	(0 <= SACDT1 <= 20) and (0 <= SACDT2 <= 20) and (0 <= SACDT3 <= 20) and (0 <= SACDT4 <= 20)	Total number of hours per week spent in sedentary activities including reading

Use total from SAC to assign value to SACDDTOT

Value of SACDDTOT	Condition(s)	Description
96 (NA)	SAC = NA	Population exclusion
99 (NS)	SAC = NS	At least one required question was not answered (don't know, refusal, not stated
1	(0 <= SAC < 5)	Less than 5 hours
2	(5 <= SAC < 10)	From 5 to 9 hours
3	(10 <= SAC < 15)	From 10 to 14 hours
4	(15 <= SAC < 20)	From 15 to 19 hours
5	(20 <= SAC < 25)	From 20 to 24 hours
6	(25 <= SAC < 30)	From 25 to 29 hours
7	(30 <= SAC < 35)	From 30 to 34 hours
8	(35 <= SAC < 40)	From 35 to 39 hours
9	(40 <= SAC < 45)	From 40 to 44 hours
10	(45 <= SAC < NA)	45 hours or more

2) Total number of hours per week spent in sedentary activities (excluding reading)

Variable name: SACDDTER
Based on: SACD_1, SACD_2, SACD_3
Previous usage: This is a new derived variable.
Description: This variable estimates the total number of hours the respondent spent in a typical week in the past three months in sedentary activities including playing computer games, using the Internet, playing video games (e.g. Nintendo, Play station), and watching television or video. For all activities, the time spent at school or work is excluded.
Note: This variable applies to youth aged 12 to 17.

Temporary variable TER

Value of TER	Condition(s)	Description
96 (NA)	SACDT1 = NA	Population exclusion
99 (NS)	(SACDT1 = DK, R, NS) or (SACDT2 = DK, R, NS) or (SACDT3 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
SACDT1 + SACDT2 + SACDT3	(0 <= SACDT1 <= 20) and (0 <= SACDT2 <= 20) and (0 <= SACDT3 <= 20)	Total number of hours per week spent in sedentary activities excluding reading

Use total from TER to assign value to SACDDTER

Value of SACDDTER	Condition(s)	Description
96 (NA)	TER = NA	Population exclusion
99 (NS)	TER = NS	At least one required question was not answered (don't know, refusal, not stated
1	(0 <= TER < 5)	Less than 5 hours
2	(5 <= TER < 10)	From 5 to 9 hours
3	(10 <= TER < 15)	From 10 to 14 hours
4	(15 <= TER < 20)	From 15 to 19 hours
5	(20 <= TER < 25)	From 20 to 24 hours
6	(25 <= TER < 30)	From 25 to 29 hours
7	(30 <= TER < 35)	From 30 to 34 hours
8	(35 <= TER < 40)	From 35 to 39 hours
9	(40 <= TER < 45)	From 40 to 44 hours
10	(45 <= TER < NA)	45 hours or more

Children's Physical Activity (2 DVs)

Temporary reformats

Condition(s)	Description
If CPAD_3 = 1 then CPADT3 = 0 If CPAD_3 = 2 then CPADT3 = 0.5 If CPAD_3 = 3 then CPADT3 = 2.5 If CPAD_3 = 4 then CPADT3 = 5 If CPAD_3 = 5 then CPADT3 = 7	Recode to midpoint of response ranges
If CPAD_4 = 1 then CPADT4 = 0 If CPAD_4 = 2 then CPADT4 = 0.5 If CPAD_4 = 3 then CPADT4 = 2.5 If CPAD_4 = 4 then CPADT4 = 5 If CPAD_4 = 5 then CPADT4 = 7	Recode to midpoint of response ranges
If CPAD_5 = 1 then CPADT5 = 0 If CPAD_5 = 2 then CPADT5 = 0.5 If CPAD_5 = 3 then CPADT5 = 2.5 If CPAD_5 = 4 then CPADT5 = 5 If CPAD_5 = 5 then CPADT5 = 7	Recode to midpoint of response ranges
If CPAD_6 = 1 then CPADT6 = 0 If CPAD_6 = 2 then CPADT6 = 0.5 If CPAD_6 = 3 then CPADT6 = 2.5 If CPAD_6 = 4 then CPADT6 = 5 If CPAD_6 = 5 then CPADT6 = 7	Recode to midpoint of response ranges
If CPAD_7 = 1 then CPADT7 = 0 If CPAD_7 = 2 then CPADT7 = 0.5 If CPAD_7 = 3 then CPADT7 = 1.5 If CPAD_7 = 4 then CPADT7 = 3.5 If CPAD_7 = 5 then CPADT7 = 5.5 If CPAD_7 = 6 then CPADT7 = 7	Recode to midpoint of response ranges
If CPAD_8 = 1 then CPADT8 = 0 If CPAD_8 = 2 then CPADT8 = 0.5 If CPAD_8 = 3 then CPADT8 = 1.5 If CPAD_8 = 4 then CPADT8 = 3.5 If CPAD_8 = 5 then CPADT8 = 5.5 If CPAD_8 = 6 then CPADT8 = 7	Recode to midpoint of response ranges

1) Total number of hours per week participated in physical activities

Variable name: CPADDTOT
Based on: CPAD_3, CPAD_4, CPAD_5, CPAD_6
Previous usage: This is a new derived variable.
Description: This variable estimates the total number of hours per week the child usually takes part in physical activities at school or outside of school.
Note: This variable applies to children aged 6 to 11.

Value of CPADDTOT	Condition(s)	Description
96 (NA)	CPAD_1 = NA	Population exclusion
99 (NS)	(CPAD_3 = DK, R, NS) or (CPAD_4 = DK, R, NS) or (CPAD_5 = DK, R, NS) or (CPAD_6 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
CPADT3 + CPADT4 + CPADT5 + CPADT6 (rounded to nearest whole number) (min: 0; max; 28)	(0 <= CPADT3 <= 7) and (0 <= CPADT4 <= 7) and (0 <= CPADT5 <= 7) and (0 <= CPADT6 <= 7)	Total number of hours per week participated in physical activities

2) Total number of hours per day spent in sedentary activities

Variable name: CPADDSAC
Based on: CPAD_7, CPAD_8
Previous usage: This is a new derived variable.
Description: This variable estimates the total number of hours per day the child aged 6 to 11 participates in sedentary activities including watching TV or videos, playing videogames, and spending time on a computer playing games, e-mailing, chatting and surfing the Internet.
Note: This variable applies to children aged 6 to 11.

Value of CPADDSAC	Condition(s)	Description
99.6 (NA)	CPAD_1 = NA	Population exclusion
99.9 (NS)	(CPAD_7 = DK, R, NS) or (CPAD_8 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
CPADT7 + CPADT8 (rounded to nearest 0.5) (min: 0.0; max: 14.0)	(0 <= CPADT7 <= 7) and (0 <= CPADT8 <= 7)	Total number of hours per day participated in sedentary activities (e.g. watching TV, spending time on a computer)

Height, Weight, and Body Mass Index - Self Reported (6 DVs)

1) Height (metres) – self-reported

Variable name: HWTDDHTM
Based on: HWTD_2, HWTD_2A, HWTD_2B, HWTD_2C, HWTD_2D, HWTD_2E, HWTD_2F
Previous usage:
CCHS 2.1 name: HWTCDHTM
CCHS 1.2 name: HWTBDHTM
CCHS 1.1 name: HWTADHTM
Description: This variable indicates the respondent's self-reported height in metres.
Note (1): This variable applies to respondents aged 2 and over.
Note (2): During sample selection of CCHS Cycle 2.2, 10% of the sample aged 18 and over were assigned the code HWTDFDO = 2 (DOMEAS = 2). Respondents with HWTDFDO = 2 were first asked to self-report their height and weight and then have their height and weight measured by the interviewer. That is, for this group of respondents it was expected to collect both measured and self-reported body measurements. The remaining sample was assigned the code HWTDFDO = 1 (DOMEAS = 1). For this group of respondents it was expected to collect only measured height and weight.

However, in cases where a respondent with HWTDFDO = 1 did not grant the interviewer the permission to take the measurements (i.e. MHWD_5C = 2) or where the interviewer could not measure the respondent's height and weight because he/she was in a wheelchair or unable to stand unassisted, then the respondent was asked to self-report his/her body measurements. If a respondent with HWTDFDO = 1 was too tall, the interviewer was instructed to ask for permission to measure his/her WEIGHT (i.e. Question MHWD_5A), but ask the respondent to self-report his/her HEIGHT.

Value of HWTDDHTM	Condition(s)	Description
9.996 (NA)	DHHD_AGE < 2 or (HWTDFDO = 1 and MHWD_5C = 1) or [HWTDFDO = 1 and (MHWD_5C = 2 or MHWD_N1 = 1 or MHWD_N1C = 2) and MHWD_9 = 2]	Population exclusion
9.999 (NS)	(HWTD_2 = DK, R, NS) or (HWTD_2A = DK, R, NS) or (HWTD_2B = DK, R, NS) or (HWTD_2C = DK, R, NS) or (HWTD_2D = DK, R, NS) or (HWTD_2E = DK, R, NS) or (HWTD_2F = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
0.279	HWTD_2 = 0	Less than 0.292 metres
0.305	HWTD_2 = 1 and HWTD_2A = 0	0.292 to 0.317 metres
0.330	HWTD_2 = 1 and HWTD_2A = 1	0.318 to 0.342 metres
0.356	HWTD_2 = 1 and HWTD_2A = 2	0.343 to 0.367 metres
0.381	HWTD_2 = 1 and HWTD_2A = 3	0.368 to 0.393 metres
0.406	HWTD_2 = 1 and HWTD_2A = 4	0.394 to 0.418 metres
0.432	HWTD_2 = 1 and	0.419 to 0.444 metres

	HWTD_2A = 5	
0.457	HWTD_2 = 1 and HWTD_2A = 6	0.445 to 0.469 metres
0.483	HWTD_2 = 1 and HWTD_2A = 7	0.470 to 0.494 metres
0.508	HWTD_2 = 1 and HWTD_2A = 8	0.495 to 0.520 metres
0.533	HWTD_2 = 1 and HWTD_2A = 9	0.521 to 0.545 metres
0.559	HWTD_2 = 1 and HWTD_2A = 10	0.546 to 0.571 metres
0.584	HWTD_2 = 1 and HWTD_2A = 11	0.572 to 0.596 metres
0.610	HWTD_2 = 2 and HWTD_2B = 0	0.597 to 0.621 metres
0.635	HWTD_2 = 2 and HWTD_2B = 1	0.622 to 0.647 metres
0.660	HWTD_2 = 2 and HWTD_2B = 2	0.648 to 0.672 metres
0.686	HWTD_2 = 2 and HWTD_2B = 3	0.673 to 0.698 metres
0.711	HWTD_2 = 2 and HWTD_2B = 4	0.699 to 0.723 metres
0.737	HWTD_2 = 2 and HWTD_2B = 5	0.724 to 0.748 metres
0.762	HWTD_2 = 2 and HWTD_2B = 6	0.749 to 0.774 metres
0.787	HWTD_2 = 2 and HWTD_2B = 7	0.775 to 0.799 metres
0.813	HWTD_2 = 2 and HWTD_2B = 8	0.800 to 0.825 metres
0.838	HWTD_2 = 2 and HWTD_2B = 9	0.826 to 0.850 metres
0.864	HWTD_2 = 2 and HWTD_2B = 10	0.851 to 0.875 metres
0.889	HWTD_2 = 2 and HWTD_2B = 11	0.876 to 0.901 metres
0.914	HWTD_2 = 3 and HWTD_2C = 0	0.902 to 0.926 metres
0.940	HWTD_2 = 3 and HWTD_2C = 1	0.927 to 0.952 metres
0.965	HWTD_2 = 3 and HWTD_2C = 2	0.953 to 0.977 metres
0.991	HWTD_2 = 3 and HWTD_2C = 3	0.978 to 1.002 metres
1.016	HWTD_2 = 3 and HWTD_2C = 4	1.003 to 1.028 metres
1.041	HWTD_2 = 3 and HWTD_2C = 5	1.029 to 1.053 metres
1.067	HWTD_2 = 3 and HWTD_2C = 6	1.054 to 1.079 metres
1.092	HWTD_2 = 3 and HWTD_2C = 7	1.080 to 1.104 metres
1.118	HWTD_2 = 3 and HWTD_2C = 8	1.105 to 1.129 metres

1.143	HWTD_2 = 3 and HWTD_2C = 9	1.130 to 1.155 metres
1.168	HWTD_2 = 3 and HWTD_2C = 10	1.156 to 1.180 metres
1.194	HWTD_2 = 3 and HWTD_2C = 11	1.181 to 1.206 metres
1.219	HWTD_2 = 4 and HWTD_2D = 0	1.207 to 1.231 metres
1.245	HWTD_2 = 4 and HWTD_2D = 1	1.232 to 1.256 metres
1.270	HWTD_2 = 4 and HWTD_2D = 2	1.257 to 1.282 metres
1.295	HWTD_2 = 4 and HWTD_2D = 3	1.283 to 1.307 metres
1.321	HWTD_2 = 4 and HWTD_2D = 4	1.308 to 1.333 metres
1.346	HWTD_2 = 4 and HWTD_2D = 5	1.334 to 1.358 metres
1.372	HWTD_2 = 4 and HWTD_2D = 6	1.359 to 1.383 metres
1.397	HWTD_2 = 4 and HWTD_2D = 7	1.384 to 1.409 metres
1.422	HWTD_2 = 4 and HWTD_2D = 8	1.410 to 1.434 meters
1.448	HWTD_2 = 4 and HWTD_2D = 9	1.435 to 1.460 metres
1.473	HWTD_2 = 4 and HWTD_2D = 10	1.461 to 1.485 meters
1.499	HWTD_2 = 4 and HWTD_2D = 11	1.486 to 1.510 metres
1.524	HWTD_2 = 5 and HWTD_2E = 0	1.511 to 1.536 meters
1.549	HWTD_2 = 5 and HWTD_2E = 1	1.537 to 1.561 metres
1.575	HWTD_2 = 5 and HWTD_2E = 2	1.562 to 1.587 metres
1.600	HWTD_2 = 5 and HWTD_2E = 3	1.588 to 1.612 metres
1.626	HWTD_2 = 5 and HWTD_2E = 4	1.613 to 1.637 metres
1.651	HWTD_2 = 5 and HWTD_2E = 5	1.638 to 1.663 metres
1.676	HWTD_2 = 5 and HWTD_2E = 6	1.664 to 1.688 metres
1.702	HWTD_2 = 5 and HWTD_2E = 7	1.689 to 1.714 metres
1.727	HWTD_2 = 5 and HWTD_2E = 8	1.715 to 1.739 metres
1.753	HWTD_2 = 5 and HWTD_2E = 9	1.740 to 1.764 metres
1.778	HWTD_2 = 5 and HWTD_2E = 10	1.765 to 1.790 metres
1.803	HWTD_2 = 5 and HWTD_2E = 11	1.791 to 1.815 metres
1.829	HWTD_2 = 6 and	1.816 to 1.841 metres

	HWTD_2F = 0	
1.854	HWTD_2 = 6 and HWTD_2F = 1	1.842 to 1.866 metres
1.880	HWTD_2 = 6 and HWTD_2F = 2	1.867 to 1.891 metres
1.905	HWTD_2 = 6 and HWTD_2F = 3	1.892 to 1.917 metres
1.930	HWTD_2 = 6 and HWTD_2F = 4	1.918 to 1.942 metres
1.956	HWTD_2 = 6 and HWTD_2F = 5	1.943 to 1.968 metres
1.981	HWTD_2 = 6 and HWTD_2F = 6	1.969 to 1.993 metres
2.007	HWTD_2 = 6 and HWTD_2F = 7	1.994 to 2.018 metres
2.032	HWTD_2 = 6 and HWTD_2F = 8	2.019 to 2.044 metres
2.057	HWTD_2 = 6 and HWTD_2F = 9	2.045 to 2.069 metres
2.083	HWTD_2 = 6 and HWTD_2F = 10	2.070 to 2.095 metres
2.108	HWTD_2 = 6 and HWTD_2F = 11	2.096 to 2.120 metres
2.134	HWTD_2 = 7	2.121 metres or taller

2) Weight (kilograms) – self-reported

Variable name: HWTDDWTK
Based on: HWTD_3, HWTD_N4
Previous usage:
CCHS 2.1 name: HWTCDWTK
CCHS 1.2 name: HWTBDWTK
CCHS 1.1 name: HWTADWTK
Description: This variable indicates the respondent's self-reported weight in kilograms.
Note (1): This variable applies to respondents aged 2 and over.
Note (2): During sample selection of CCHS Cycle 2.2, 10% of the sample aged 18 and over were assigned the code HWTDFDO = 2 (DOMEAS = 2). Respondents with HWTDFDO = 2 were first asked to self-report their height and weight and then have their height and weight measured by the interviewer. That is, for this group of respondents it was expected to collect both measured and self-reported body measurements. The remaining sample was assigned the code HWTDFDO = 1 (DOMEAS = 1). For this group of respondents it was expected to collect only measured height and weight.

However, in cases where a respondent with HWTDFDO = 1 did not grant the interviewer the permission to take the measurements (i.e. MHWD_5C = 2) or that the interviewer could not measure the respondent's height and weight because he/she was in a wheelchair or unable to stand unassisted, then the respondent was asked to self-report his/her body measurements. If a respondent with HWTDFDO = 1 was too tall, the interviewer was instructed to ask for permission to measure his/her WEIGHT (i.e. Question MHWD_5A), but ask the respondent to self-report his/her HEIGHT.

Value of HWTDDWTK	Condition(s)	Description
999.96 (NA)	DHHD_AGE < 2 or [HWTDFDO = 1 and (MHWD_5C = 1 or (MHWD_5A = 1, 2) or MHWD_9 = 2)]	Population exclusion
999.99 (NS)	(HWTD_3 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
HWTD_3	HWTD_N4 = 2	Weight in kg
HWTD_3 × 0.45	HWTD_N4 = 1	Weight in kg, converted from lb

3) Self-reported height and weight are both available

Variable name: HWTDFHW
Based on: HWTDDHTM, HWTDDWTK
Previous usage: This is a new derived variable.
Description: This variable indicated whether or not a valid value is available for both self-reported height and weight.
Note: This variable applies to respondents aged 2 and over.

Value of HWTDFHW	Condition(s)	Description
6 (NA)	DHHD_AGE < 2 or (HWTDFDO = 1 and MHWDFHW = 1)	Population exclusion
1	0.305 <= HWTDDHTM <= 2.108 and 0 < HWTDDWTK <= 260	Both self-reported height and weight available
2	Else	At least one of self-reported height and weight unavailable

4) Body Mass Index (BMI) – self-reported

Variable name: HWTDDBMI
Based on: HWTDFHW, HWTDHWTK, HWTDDHTM
Previous usage:
CCHS 2.1 name: HWTCDBMI
CCHS 1.2 name: HWTBDBMI
CCHS 1.1 name: HWTADBMI
NPHS Cycle 5 name: HWC2DBMI
NPHS Cycle 4 name: HWC0DBMI
NPHS Cycle 3 name: HWC8DBMI
NPHS Cycle 2 name: HWC6DBMI
NPHS Cycle 1 name: HWC4DBMI *(formerly DVBMI94)*
Description: Body Mass Index (BMI) is a comparison of "self-reported weight" relative to the "self-reported height" of respondents. BMI is calculated by dividing weight in kilograms by height in metres squared.

(BMI = WEIGHT (KG) / HEIGHT (METRES) SQUARED)

Note (1): BMI is not calculated for pregnant women. Although calculation of BMI is not recommended for lactating women, the index provided here is calculated for women who report that they are breastfeeding (WHCD_05 = 1) to permit comparability with previous CCHS cycles.
Note (2): For Cycles 1.1 and 1.2 of CCHS, BMI was calculated only for respondents aged 20-64. For Cycle 2.1, BMI was calculated for respondents aged 18 and over. But for Cycle 2.2, BMI is calculated for persons aged 2 and over.
Note (3): In previous CCHS cycles, BMI was not calculated for those less than 3 feet or for those 7 feet or over. For Cycle 2.2, since children are included, BMI is calculated for those 1 foot or more.
Note (4): This BMI classification is created using "self-reported height" and "self-reported weight" variables.

Value of HWTDDBMI	Condition(s)	Description
999.96 (NA)	WHCD_03 = 1 or DHHD_AGE < 2 or (HWTDFDO = 1 and MHWDFHW = 1)	Population exclusion
999.99 (NS)	HWTDFHW = 2	Respondents for whom a valid self-reported height and weight was not obtained
999.99 (NS)	DHHD_SEX = 2 and (WHCD_03 = DK, R, NS)	Females who did not answer the pregnancy question (don't know, refusal, not stated)
HWTDHWTK / (HWTDDHTM × HWTDDHTM) (Rounded to two decimal places)	HWTDFHW = 1	BMI calculated from self-reported height and self-reported weight values

5) BMI classification for adults aged 18 and over (self-reported) – international standard

Variable name: HWTDDISW
Based on: HWTDDBMI
Previous usage:
CCHS 2.1 name: HWTCDISW
Description: This variable assigns adult respondents aged 18 and over (except pregnant women) to one of the following categories, according to their BMI: underweight, acceptable weight, overweight or obese. Here, the BMI categories are adopted from a body weight classification system recommended by Health Canada and the World Health Organization (WHO) which has been widely used internationally.

According to Health Canada, this BMI classification system can be used as a screening tool to identify weight-related health risks at the population and individual levels. The following health risks are associated with each of the BMI categories for adults aged 18 and over:

- normal weight = least health risk;
- underweight and overweight = increased health risk;
- obese class I = high health risk;
- obese class II = very high health risk;
- obese class III = extremely high health risk

At the population level, the BMI classification system can be used to compare body weight patterns and related health risks within and between populations and to establish population trends in body weight patterns. The classification should be used with caution at the individual level because the health risk associated with each BMI category varies considerably between individuals. Particular caution should be used when classifying: adults who are naturally very lean, very muscular adults, some ethnic and racial groups, and seniors. For more detailed information see *Canadian Guidelines for Body Weight Classification in Adults*, Health Canada, 2003 (available online at: http://www.hc-sc.gc.ca/fn-an/nutrition/weights-poids/cg_bwc_int-ld_cpa_int_e.html)
Note: This variable excludes female respondents aged 18 to 55 who were pregnant or did not answer the pregnancy question (i.e. WHCD_03 = don't know, refusal, not stated).

Value of HWTDDISW	Condition(s)	Description
96 (NA)	WHCD_03 = 1 or DHHD_AGE < 18 or (HWTDFDO = 1 and MHWDFHW = 1)	Population exclusion
99 (NS)	HWTDDBMI = NS	At least one required question was not answered (don't know, refusal, not stated)
1	HWTDDBMI < 18.50	Underweight
2	18.50 <= HWTDDBMI <= 24.99	Normal weight
3	25.00 <= HWTDDBMI <= 29.99	Overweight
4	30.00 <= HWTDDBMI <= 34.99	Obese – Class I
5	35.00 <= HWTDDBMI <= 39.99	Obese – Class II
6	HWTDDBMI >= 40.00	Obese – Class III

6) BMI classification for children aged 2 to 17 (self-reported) – Cole classification system

Variable name: HWTDDCOL
Based on: HWTDDBMI, DHHD_AGM, DHHD_SEX
Previous usage: This is a new derived variable.
Description: This variable classifies the BMI of children aged 2 to 17 as "obese" or "overweight" according to the age-and-sex-specific BMI cut-off points as defined by Cole et al. The Cole cut-off points are based on pooled international data (Brazil, Great Britain, Hong Kong, Netherlands, Singapore, and United States) for BMI and linked to the widely internationally accepted adult BMI cut-off points of 25 (overweight) and 30 kg/m^2 (obese). For more information about the Cole BMI classification system, see *Establishing a Standard Definition for Child Overweight and Obesity Worldwide - International survey,* by Tim J Cole, Mary C Bellizzi, Katherine M. Flegal, William H Dietz, published in British Medical Journal, Volume: 320, May 2000.
Note (1): Respondents who do not fall within the categories of "Obese" or "Overweight" (as defined by Cole et al.) have been classified by CCHS as "neither obese nor overweight".
Note (2): This variable excludes female respondents aged 15 to 17 who were pregnant or did not answer the pregnancy question (i.e. WHCD_03 = don't know, refusal, not stated).
Note (3): This variable excludes respondents who are 216 months in age, i.e. 18 years old or older.

Temporary reformats

Reformat	Description
If DHHD_AGM < 9996, then AGEDT1 = DHHD_AGM / 12 (Rounded to nearest 0.5)	Convert respondent's "age in months" to "age in years"

Value of HWTDDCOL	Condition(s)	Description
6 (NA)	WHCD_03 = 1 or DHHD_AGE < 2 or DHHD_AGM >= 216 or (HWTDFDO = 1 and MHWDFHW = 1)	Population exclusion
9 (NS)	HWTDDBMI = NS	At least one required question was not answered (don't know, refusal, not stated)
3	(**AGEDT1 = 2** and DHHD_SEX = 1 and HWTDDBMI >= 20.09) or (AGEDT1 = 2 and DHHD_SEX = 2 and HWTDDBMI >= 19.81) or (**AGEDT1 = 2.5** and DHHD_SEX = 1 and HWTDDBMI >= 19.80) or (AGEDT1 = 2.5 and DHHD_SEX = 2 and HWTDDBMI >= 19.55) or (**AGEDT1 = 3** and DHHD_SEX = 1 and HWTDDBMI >= 19.57) or (AGEDT1 = 3 and DHHD_SEX = 2 and HWTDDBMI >= 19.36) or (**AGEDT1 = 3.5** and DHHD_SEX = 1 and HWTDDBMI >= 19.39) or (AGEDT1 = 3.5 and DHHD_SEX = 2 and HWTDDBMI >= 19.23) or (**AGEDT1 = 4** and DHHD_SEX = 1 and HWTDDBMI >= 19.29) or (AGEDT1 = 4 and DHHD_SEX = 2 and HWTDDBMI >= 19.15) or (**AGEDT1 = 4.5** and DHHD_SEX = 1 and HWTDDBMI >= 19.26) or (AGEDT1 = 4.5 and DHHD_SEX = 2 and HWTDDBMI >= 19.12) or (**AGEDT1 = 5** and DHHD_SEX = 1 and HWTDDBMI >= 19.30) or (AGEDT1 = 5 and DHHD_SEX = 2 and HWTDDBMI >= 19.17) or (**AGEDT1 = 5.5** and DHHD_SEX = 1 and HWTDDBMI >= 19.47) or (AGEDT1 = 5.5 and DHHD_SEX = 2 and	Obese

	HWTDDBMI >= 19.34) or (**AGEDT1 = 6** and DHHD_SEX = 1 and HWTDDBMI >= 19.78) or (AGEDT1 = 6 and DHHD_SEX = 2 and HWTDDBMI >= 19.65) or (**AGEDT1 = 6.5** and DHHD_SEX = 1 and HWTDDBMI >= 20.23) or (AGEDT1 = 6.5 and DHHD_SEX = 2 and HWTDDBMI >= 20.08) or (**AGEDT1 = 7** and DHHD_SEX = 1 and HWTDDBMI >= 20.63) or (AGEDT1 = 7 and DHHD_SEX = 2 and HWTDDBMI >= 20.51) or (**AGEDT1 = 7.5** and DHHD_SEX = 1 and HWTDDBMI >= 21.09) or (AGEDT1 = 7.5 and DHHD_SEX = 2 and HWTDDBMI >= 21.01) or (**AGEDT1 = 8** and DHHD_SEX = 1 and HWTDDBMI >= 21.60) or (AGEDT1 = 8 and DHHD_SEX = 2 and HWTDDBMI >= 21.57) or (**AGEDT1 = 8.5** and DHHD_SEX = 1 and HWTDDBMI >= 22.17) or (AGEDT1 = 8.5 and DHHD_SEX = 2 and HWTDDBMI >= 22.18) or (**AGEDT1 = 9** and DHHD_SEX = 1 and HWTDDBMI >= 22.77) or (AGEDT1 = 9 and DHHD_SEX = 2 and HWTDDBMI >= 22.81) or (**AGEDT1 = 9.5** and DHHD_SEX = 1 and HWTDDBMI >= 23.39) or (AGEDT1 = 9.5 and DHHD_SEX = 2 and HWTDDBMI >= 23.46) or (**AGEDT1 = 10** and DHHD_SEX = 1 and HWTDDBMI >= 24.00) or (AGEDT1 = 10 and DHHD_SEX = 2 and HWTDDBMI >= 24.11) or (**AGEDT1 = 10.5** and DHHD_SEX = 1 and	

	HWTDDBMI >= 24.57) or (AGEDT1 = 10.5 and DHHD_SEX = 2 and HWTDDBMI >= 24.77) or (**AGEDT1 = 11** and DHHD_SEX = 1 and HWTDDBMI >= 25.10) or (AGEDT1 = 11 and DHHD_SEX = 2 and HWTDDBMI >= 25.42) or (**AGEDT1 = 11.5** and DHHD_SEX = 1 and HWTDDBMI >= 25.58) or (AGEDT1 = 11.5 and DHHD_SEX = 2 and HWTDDBMI >= 26.05) or (**AGEDT1 = 12** and DHHD_SEX = 1 and HWTDDBMI >= 26.02) or (AGEDT1 = 12 and DHHD_SEX = 2 and HWTDDBMI >= 26.67) or (**AGEDT1 = 12.5** and DHHD_SEX = 1 and HWTDDBMI >= 26.43) or (AGEDT1 = 12.5 and DHHD_SEX = 2 and HWTDDBMI >= 27.24) or (**AGEDT1 = 13** and DHHD_SEX = 1 and HWTDDBMI >= 26.84) or (AGEDT1 = 13 and DHHD_SEX = 2 and HWTDDBMI >= 27.76) or (**AGEDT1 = 13.5** and DHHD_SEX = 1 and HWTDDBMI >= 27.25) or (AGEDT1 = 13.5 and DHHD_SEX = 2 and HWTDDBMI >= 28.20) or (**AGEDT1 = 14** and DHHD_SEX = 1 and HWTDDBMI >= 27.63) or (AGEDT1 = 14 and DHHD_SEX = 2 and HWTDDBMI >= 28.57) or (**AGEDT1 = 14.5** and DHHD_SEX = 1 and HWTDDBMI >= 27.98) or (AGEDT1 = 14.5 and DHHD_SEX = 2 and HWTDDBMI >= 28.87) or (**AGEDT1 = 15** and DHHD_SEX = 1 and HWTDDBMI >= 28.30) or (AGEDT1 = 15 and DHHD_SEX = 2 and	

	HWTDDBMI >= 29.11) or (**AGEDT1 = 15.5** and DHHD_SEX = 1 and HWTDDBMI >= 28.60) or (AGEDT1 = 15.5 and DHHD_SEX = 2 and HWTDDBMI >= 29.29) or (**AGEDT1 = 16** and DHHD_SEX = 1 and HWTDDBMI >= 28.88) or (AGEDT1 = 16 and DHHD_SEX = 2 and HWTDDBMI >= 29.43) or (**AGEDT1 = 16.5** and DHHD_SEX = 1 and HWTDDBMI >= 29.14) or (AGEDT1 = 16.5 and DHHD_SEX = 2 and HWTDDBMI >= 29.56) or (**AGEDT1 = 17** and DHHD_SEX = 1 and HWTDDBMI >= 29.41) or (AGEDT1 = 17 and DHHD_SEX = 2 and HWTDDBMI >= 29.69) or (**AGEDT1 = 17.5** and DHHD_SEX = 1 and HWTDDBMI >= 29.70) or (AGEDT1 = 17.5 and DHHD_SEX = 2 and HWTDDBMI >= 29.84) or (**AGEDT1 = 18** and DHHD_SEX = 1 and HWTDDBMI >= 30.00) or (AGEDT1 = 18 and DHHD_SEX = 2 and HWTDDBMI >= 30.00)	
2	(**AGEDT1 = 2** and DHHD_SEX = 1 and 18.41 <= HWTDDBMI < 20.09) or (AGEDT1 = 2 and DHHD_SEX = 2 and 18.02 <= HWTDDBMI < 19.81) or (**AGEDT1 = 2.5** and DHHD_SEX = 1 and 18.13 <= HWTDDBMI < 19.80) or (AGEDT1 = 2.5 and DHHD_SEX = 2 and 17.76 <= HWTDDBMI < 19.55) or **(AGEDT1 = 3** and DHHD_SEX = 1 and 17.89 <= HWTDDBMI < 19.57) or (AGEDT1 = 3 and DHHD_SEX = 2 and 17.56 <= HWTDDBMI < 19.36) or **(AGEDT1 = 3.5** and DHHD_SEX = 1 and	Overweight

	17.69 <= HWTDDBMI < 19.39) or (AGEDT1 = 3.5 and DHHD_SEX = 2 and 17.40 <= HWTDDBMI < 19.23) or **(AGEDT1 = 4** and DHHD_SEX = 1 and 17.55 <= HWTDDBMI < 19.29) or (AGEDT1 = 4 and DHHD_SEX = 2 and 17.28 <= HWTDDBMI < 19.15) or **(AGEDT1 = 4.5** and DHHD_SEX = 1 and 17.47 <= HWTDDBMI < 19.26) or (AGEDT1 = 4.5 and DHHD_SEX = 2 and 17.19 <= HWTDDBMI < 19.12) or **(AGEDT1 = 5** and DHHD_SEX = 1 and 17.42 <= HWTDDBMI < 19.30) or (AGEDT1 = 5 and DHHD_SEX = 2 and 17.15 <= HWTDDBMI < 19.17) or **(AGEDT1 = 5.5** and DHHD_SEX = 1 and 17.45 <= HWTDDBMI < 19.47) or (AGEDT1 = 5.5 and DHHD_SEX = 2 and 17.20 <= HWTDDBMI < 19.34) or **(AGEDT1 = 6** and DHHD_SEX = 1 and 17.55 <= HWTDDBMI < 19.78) or (AGEDT1 = 6 and DHHD_SEX = 2 and 17.34 <= HWTDDBMI < 19.65) or **(AGEDT1 = 6.5** and DHHD_SEX = 1 and 17.71 <= HWTDDBMI < 20.23) or (AGEDT1 = 6.5 and DHHD_SEX = 2 and 17.53 <= HWTDDBMI < 20.08) or **(AGEDT1 = 7** and DHHD_SEX = 1 and 17.92 <= HWTDDBMI < 20.63) or (AGEDT1 = 7 and DHHD_SEX = 2 and 17.75 <= HWTDDBMI < 20.51) or **(AGEDT1 = 7.5** and DHHD_SEX = 1 and 18.16 <= HWTDDBMI < 21.09) or (AGEDT1 = 7.5 and DHHD_SEX = 2 and 18.03 <= HWTDDBMI < 21.01) or **(AGEDT1 = 8** and DHHD_SEX = 1 and 18.44 <= HWTDDBMI < 21.60) or (AGEDT1 = 8 and DHHD_SEX = 2 and	

	18.35 <= HWTDDBMI < 21.57) or **(AGEDT1 = 8.5** and DHHD_SEX = 1 and 18.76 <= HWTDDBMI < 22.17) or (AGEDT1 = 8.5 and DHHD_SEX = 2 and 18.69 <= HWTDDBMI < 22.18) or **(AGEDT1 = 9** and DHHD_SEX = 1 and 19.10 <= HWTDDBMI < 22.77) or (AGEDT1 = 9 and DHHD_SEX = 2 and 19.07 <= HWTDDBMI < 22.81) or **(AGEDT1 = 9.5** and DHHD_SEX = 1 and 19.46 <= HWTDDBMI < 23.39) or (AGEDT1 = 9.5 and DHHD_SEX = 2 and 19.45 <= HWTDDBMI < 23.46) or **(AGEDT1 = 10** and DHHD_SEX = 1 and 19.84 <= HWTDDBMI < 24.00) or (AGEDT1 = 10 and DHHD_SEX = 2 and 19.86 <= HWTDDBMI < 24.11) or **(AGEDT1 = 10.5** and DHHD_SEX = 1 and 20.20 <= HWTDDBMI < 24.57) or (AGEDT1 = 10.5 and DHHD_SEX = 2 and 20.29 <= HWTDDBMI < 24.77) or **(AGEDT1 = 11** and DHHD_SEX = 1 and 20.55 <= HWTDDBMI < 25.10) or (AGEDT1 = 11 and DHHD_SEX = 2 and 20.74 <= HWTDDBMI < 25.42) or **(AGEDT1 = 11.5** and DHHD_SEX = 1 and 20.89 <= HWTDDBMI < 25.58) or (AGEDT1 = 11.5 and DHHD_SEX = 2 and 21.20 <= HWTDDBMI < 26.05) or **(AGEDT1 = 12** and DHHD_SEX = 1 and 21.22 <= HWTDDBMI < 26.02) or (AGEDT1 = 12 and DHHD_SEX = 2 and 21.68 <= HWTDDBMI < 26.67) or **(AGEDT1 = 12.5** and DHHD_SEX = 1 and 21.56 <= HWTDDBMI < 26.43) or (AGEDT1 = 12.5 and DHHD_SEX = 2 and 22.14 <= HWTDDBMI < 27.24) or **(AGEDT1 = 13** and DHHD_SEX = 1 and	

	21.91 <= HWTDDBMI < 26.84) or (AGEDT1 = 13 and DHHD_SEX = 2 and 22.58 <= HWTDDBMI < 27.76) or **(AGEDT1 = 13.5** and DHHD_SEX = 1 and 22.27 <= HWTDDBMI < 27.25) or (AGEDT1 = 13.5 and DHHD_SEX = 2 and 22.98 <= HWTDDBMI < 28.20) or **(AGEDT1 = 14** and DHHD_SEX = 1 and 22.62 <= HWTDDBMI < 27.63) or (AGEDT1 = 14 and DHHD_SEX = 2 and 23.34 <= HWTDDBMI < 28.57) or **(AGEDT1 = 14.5** and DHHD_SEX = 1 and 22.96 <= HWTDDBMI < 27.98) or (AGEDT1 = 14.5 and DHHD_SEX = 2 and 23.66 <= HWTDDBMI < 28.87) or **(AGEDT1 = 15** and DHHD_SEX = 1 and 23.29 <= HWTDDBMI < 28.30) or (AGEDT1 = 15 and DHHD_SEX = 2 and 23.94 <= HWTDDBMI < 29.11) or **(AGEDT1 = 15.5** and DHHD_SEX = 1 and 23.60 <= HWTDDBMI < 28.60) or (AGEDT1 = 15.5 and DHHD_SEX = 2 and 24.17 <= HWTDDBMI < 29.29) or **(AGEDT1 = 16** and DHHD_SEX = 1 and 23.90 <= HWTDDBMI < 28.88) or (AGEDT1 = 16 and DHHD_SEX = 2 and 24.37 <= HWTDDBMI < 29.43) or **(AGEDT1 = 16.5** and DHHD_SEX = 1 and 24.19 <= HWTDDBMI < 29.14) or (AGEDT1 = 16.5 and DHHD_SEX = 2 and 24.54 <= HWTDDBMI < 29.56) or **(AGEDT1 = 17** and DHHD_SEX = 1 and 24.46 <= HWTDDBMI < 29.41) or (AGEDT1 = 17 and DHHD_SEX = 2 and 24.70 <= HWTDDBMI < 29.69) or **(AGEDT1 = 17.5** and DHHD_SEX = 1 and 24.73 <= HWTDDBMI < 29.70) or (AGEDT1 = 17.5 and DHHD_SEX = 2 and	

	24.85 <= HWTDDBMI < 29.84) or **(AGEDT1 = 18** and DHHD_SEX = 1 and 25.00 <= HWTDDBMI < 30.00) or (AGEDT1 = 18 and DHHD_SEX = 2 and 25.00 <= HWTDDBMI < 30.00)	
1	Else	Neither overweight nor obese

Height, Weight, and Body Mass Index - Measured (7 DVs)

1) Height (metres) – measured

Variable name: MHWDDHTM
Based on: MHWD_N8
Previous usage: This is a new derived variable.
Description: This variable indicates the respondent's height in metres as measured by an interviewer.
Note (1): This variable applies to respondents aged 2 and over.
Note (2): During sample selection of CCHS Cycle 2.2, 10% of the sample aged 18 and over were assigned the code HWTDFDO = 2 (DOMEAS = 2). Respondents with HWTDFDO = 2 were first asked to self-report their height and weight and then have their height and weight measured by the interviewer. However, respondents' height and weight were not measured if they had refused to self-report their body measures.

Value of MHWDDHTM	Condition(s)	Description
9.996 (NA)	DHHD_AGE < 2	Population exclusion
9.999 (NS)	MHWD_N1C = 2 or MHWD_N1 = 1 or MHWD_N3 = 1 or MHWD_5C = 2	Respondents who could not be measured due to their condition, unavailability or refusal
9.999 (NS)	HWTDFDO = 2 and (HWTD_2 = R or HWTD_3 = R)	Respondent with HWTDFDO = 2 who refused to self-report his/her height or weight in "Self-reported Height and Weight Module"
9.999 (NS)	(MHWD_N8 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
MHWD_N8 / 100	0 < MHWD_N8 < NA	Height in metres

2) Weight (kilograms) – measured

Variable name: MHWDDWTK
Based on: MHWD_N6
Previous usage: This is a new derived variable.
Description: This variable indicates the respondent's weight in kilograms as measured by an interviewer.
Note (1): This variable applies to respondents aged 2 and over.
Note (2): During sample selection of CCHS Cycle 2.2, 10% of the sample aged 18 and over were assigned the code HWTDFDO = 2 (DOMEAS = 2). Respondents with HWTDFDO = 2 were first asked to self-report their height and weight and then have their height and weight measured by the interviewer. However, respondents' height and weight were not measured if they had refused to self-report their body measures.

Value of MHWDDWTK	Condition(s)	Description
999.96 (NA)	DHHD_AGE < 2	Population exclusion
999.99 (NS)	MHWD_N1C = 2 or MHWD_N1 = 1 or MHWD_5A = 2 or MHWD_5B = 2 or MHWD_5C = 2	Respondents who could not be measured due to their condition, unavailability, or refusal
999.99 (NS)	HWTDFDO = 2 and (HWTD_2 = R or HWTD_3 = R)	Respondent with HWTDFDO=2 who refused to self-report his/her height or weight in "Self-reported Height and Weight Module"
999.99 (NS)	(MHWD_N6 = DK, R, NS)	Required question was not

		answered (don't know, refusal, not stated)
MHWD_N6	0 < MHWD_N6 < NA	Weight in kilograms

3) Reasons for not calculating BMI

Variable name: MHWDDRSN
Based on: MHWD_N1C, MHWD_N1, MHWD_N2A, MHWD_N2B, MHWD_N2C, MHWD_N2D, MHWD_N2E, MHWD_N2F, MHWD_N2G, MHWD_N2H, MHWD_N2I, MHWD_N2J, MHWD_N2K, MHWD_N2L, MHWD_N3, MHWD_5A, MHWD_5B, MHWD_5C, MHWD_N8, MHWD_N6, HWTD_2, HWTD_3, HWTDFDO, WHCD_03
Previous usage: This is a new derived variable.
Description: This variable indicates reasons why the Body Mass Index (BMI) was not calculated.

Value of MHWDDRSN	Condition(s)	Description
96 (NA)	DHHD_AGE < 2 or WHCD_03 = 1	Population exclusion
1	MHWD_N1C = 2 or (MHWD_N1 = 1 and MHWD_N2G = 2 and MHWD_N2I = 1)	Respondent not available to be measured
2	MHWD_N3 = 1 or (MHWD_N1 = 1 and MHWD_N2G = 2 and MHWD_N2L = 1)	Respondent too tall for interviewer to measure his/her height
3	MHWD_N1 = 1 and MHWD_N2G = 2 and (MHWD_N2A = 1 or MHWD_N2B = 1 or MHWD_N2C = 1 or MHWD_N2D = 1)	Not able to measure due to respondent's physical condition
4	MHWD_N1 = 1 and MHWD_N2G = 2 and (MHWD_N2E = 1 or MHWD_N2F = 1)	Interview setting is a problem
5	MHWD_N1 = 1 and MHWD_N2G = 2 and MHWD_N2J = 1	Problem with measuring equipment (e.g. unavailable, scale malfunction, respondent's weight exceeds scale capacity, interviewer not able to carry equipment due to health problems)
6	MHWD_N1 = 1 and MHWD_N2G = 2 and MHWD_N2K = 1	Telephone interview
7	MHWD_5A = 2 or MHWD_5C = 2 or (MHWD_N1 = 1 and MHWD_N2G = 1)	Respondent refused permission to be measured by the interviewer
8	HWTDFDO = 2 and (HWTD_2 = R or HWTD_3 = R)	Respondent refused to self-report either height or weight
9	(MHWD_N8 = DK, R, NS) or (MHWD_N6 = DK, R, NS)	Measured height or weight value not recorded

10	(MHWD_N1 = 1 and MHWD_N2G = 2 and MHWD_N2H = 1) or (WHCD_03 = DK, R, NS)	Other reason includes unknown pregnancy status
11	Else	Respondent's measured height or weight value available

4) Measured height and weight both available

Variable name: MHWDFHW
Based on: MHWD_N6, MHWD_N8
Previous usage: This is a new derived variable.
Description: After getting permission to proceed, interviewers were instructed to measure the respondent's height and weight. This variable indicates whether or not both measured height and weight are available.
Note: This variable applies to respondents aged 2 and over.

Value of MHWDFHW	Condition(s)	Description
6 (NA)	DHHD_AGE < 2	Population exclusion
1	MHWD_N6 <= 150 and MHWD_N8 <= 350.0	Both measured height and weight available
2	Else	At least one of measured height and weight unavailable

5) Body Mass Index (BMI) – measured

Variable name: MHWDDBMI
Based on: MHWDFHW, MHWDDHTM, MHWDDWTK
Previous usage: This is a new derived variable.
Description: Body Mass Index (BMI) is a comparison of "measured weight" relative to the "measured height" of respondents. BMI is calculated by dividing weight in kilograms by height in metres squared.

(BMI = WEIGHT (KG) / HEIGHT (METRES) SQUARED)

Note (1): BMI is not calculated for pregnant women. Although calculation of BMI is not recommended for lactating women, the index provided here is calculated for women who report that they are breastfeeding (WHCD_05 = 1) to permit comparability with previous CCHS cycles.
Note (2): For Cycles 1.1 and 1.2 of CCHS, BMI was calculated only for respondents aged 20-64. For Cycle 2.1, BMI was calculated for respondents aged 18 and over. For Cycle 2.2, BMI is calculated for persons aged 2 and over.
Note (3): This BMI classification is created using "measured height" and "measured weight" variables.
Note (4): For information about respondents for whom a valid measured height and weight was not obtained, see derived variable MHWDDRSN.

Value of MHWDDBMI	Condition(s)	Description
999.96 (NA)	WHCD_03 = 1 or DHHD_AGE < 2	Population exclusion
999.99 (NS)	MHWDFHW = 2	Respondents for whom a valid measured height and weight was not obtained

999.99 (NS)	DHHD_SEX = 2 and (WHCD_03 = DK, R, NS)	Females who did not answer the pregnancy question (don't know, refusal, not stated)
MHWDDWTK / (MHWDDHTM × MHWDDHTM) (rounded to two decimal places)	MHWDFHW = 1	BMI calculated from both measured height and measured weight values

6) BMI classification for adults aged 18 and over (measured) – international standard

Variable name: MHWDDISW
Based on: MHWDDBMI
Previous usage: This is a new derived variable
Description: This variable assigns adult respondents aged 18 and over (except pregnant women) to one of the following categories, according to their BMI: underweight, acceptable weight, overweight, or obese. Here, the BMI categories are adopted from a body weight classification system recommended by Health Canada and the World Health Organization (WHO) which has been widely used internationally.

According to Health Canada, this BMI classification system can be used as a screening tool to identify weight-related health risks at the population and individual levels. The following health risks are associated with each of the BMI categories for adults aged 18 and over:

- normal weight = least health risk;
- underweight and overweight = increased health risk;
- obese class I = high health risk;
- obese class II = very high health risk;
- obese class III = extremely high health risk

At the population level, the BMI classification system can be used to compare body weight patterns and related health risks within and between populations and to establish population trends in body weight patterns. The classification should be used with caution at the individual level because the health risk associated with each BMI category varies considerably between individuals. In addition, particular caution should be used when classifying: adults who are naturally very lean, very muscular adults, some ethnic and racial groups, and seniors. For more detailed information see *Canadian Guidelines for Body Weight Classification in Adults*, Health Canada, 2003 (available online at: http://www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/weight_book_e.pdf).
Note: This variable excludes female respondents aged 18 to 55 who were pregnant or did not answer the pregnancy question (i.e. WHCD_03= don't know, refusal, not stated).

Value of MHWDDISW	Condition(s)	Description
96 (NA)	WHCD_03 = 1 or DHHD_AGE < 18	Population exclusion
99 (NS)	MHWDDBMI = NS	At least one required question was not answered (don't know, refusal, not stated)
1	MHWDDBMI < 18.50	Underweight
2	18.50 <= MHWDDBMI <= 24.99	Normal weight
3	25.00 <= MHWDDBMI <= 29.99	Overweight
4	30.00 <= MHWDDBMI <= 34.99	Obese – Class I
5	35.00 <= MHWDDBMI <= 39.99	Obese – Class II
6	MHWDDBMI >= 40.00	Obese – Class III

7) BMI classification for children aged 2 to 17 (measured) – Cole classification system

Variable name: MHWDDCOL
Based on: MHWDDBMI, DHHD_SEX, DHHD_AGM
Previous usage: This is a new derived variable
Description: This variable classifies the measured BMI of children aged 2 to 17 as "obese" or "overweight" according to the age-and-sex-specific BMI cut-off points as defined by Cole et al. The Cole cut-off points are based on pooled international data (Brazil, Great Britain, Hong Kong, Netherlands, Singapore, and United States) for BMI and linked to the internationally accepted adult BMI cut-off points of 25 (overweight) and 30 kg/m^2 (obese). For more information about the Cole BMI classification system, see *Establishing a Standard Definition for Child Overweight and Obesity Worldwide - International survey,* by Tim J. Cole, Mary C. Bellizzi, Katherine M. Flegal, William H. Dietz, published in British Medical Journal, Volume: 320, May 2000.
Note (1): Respondents who do not fall within the categories of "Obese" or "Overweight" (as defined by Cole et al.) have been classified by CCHS as "neither obese nor overweight".
Note (2): This variable excludes female respondetns aged 18 to 55 who were pregnant or did not answer the pregnancy question (i.e. WHCD_03= don't know, refusal, not stated).
Note (3): This variable excludes respondents who are 216 months in age, i.e. 18 years old or older.

Temporary reformats

Condition(s)	Description
If DHHD_AGM < 9996, then AGEDT1 = DHHD_AGM / 12 (Rounded to nearest 0.5)	Convert respondent's "age in months" to "age in years"

Value of MHWDDCOL	Condition(s)	Description
6 (NA)	WHCD_03 = 1 or DHHD_AGE < 2 or DHHD_AGM >= 216	Population exclusion
9 (NS)	MHWDDBMI = NS	At least one required question was not answered (don't know, refusal, not stated)
3	(**AGEDT1 = 2** and DHHD_SEX = 1 and MHWDDBMI >= 20.09) or (AGEDT1 = 2 and DHHD_SEX = 2 and MHWDDBMI >= 19.81) or (**AGEDT1 = 2.5** and DHHD_SEX = 1 and MHWDDBMI >= 19.80) or (AGEDT1 = 2.5 and DHHD_SEX = 2 and MHWDDBMI >= 19.55) or (**AGEDT1 = 3** and DHHD_SEX = 1 and MHWDDBMI >= 19.57) or (AGEDT1 = 3 and DHHD_SEX = 2 and MHWDDBMI >= 19.36) or (**AGEDT1 = 3.5** and DHHD_SEX = 1 and MHWDDBMI >= 19.39) or (AGEDT1 = 3.5 and DHHD_SEX = 2 and	Obese

	MHWDDBMI >= 19.23) or (**AGEDT1 = 4** and DHHD_SEX = 1 and MHWDDBMI >= 19.29) or (AGEDT1 = 4 and DHHD_SEX = 2 and MHWDDBMI >= 19.15) or (**AGEDT1 = 4.5** and DHHD_SEX = 1 and MHWDDBMI >= 19.26) or (AGEDT1 = 4.5 and DHHD_SEX = 2 and MHWDDBMI >= 19.12) or (**AGEDT1 = 5** and DHHD_SEX = 1 and MHWDDBMI >= 19.30) or (AGEDT1 = 5 and DHHD_SEX = 2 and MHWDDBMI >= 19.17) or (**AGEDT1 = 5.5** and DHHD_SEX = 1 and MHWDDBMI >= 19.47) or (AGEDT1 = 5.5 and DHHD_SEX = 2 and MHWDDBMI >= 19.34) or (**AGEDT1 = 6** and DHHD_SEX = 1 and MHWDDBMI >= 19.78) or (AGEDT1 = 6 and DHHD_SEX = 2 and MHWDDBMI >= 19.65) or (**AGEDT1 = 6.5** and DHHD_SEX = 1 and MHWDDBMI >= 20.23) or (AGEDT1 = 6.5 and DHHD_SEX = 2 and MHWDDBMI >= 20.08) or (**AGEDT1 = 7** and DHHD_SEX = 1 and MHWDDBMI >= 20.63) or (AGEDT1 = 7 and HHD_SEX = 2 and MHWDDBMI >= 20.51) or (**AGEDT1 = 7.5** and DHHD_SEX = 1 and MHWDDBMI >= 21.09) or (AGEDT1 = 7.5 and DHHD_SEX = 2 and MHWDDBMI >= 21.01) or (**AGEDT1 = 8** and DHHD_SEX = 1 and MHWDDBMI >= 21.60) or (AGEDT1 = 8 and DHHD_SEX = 2 and MHWDDBMI >= 21.57) or (**AGEDT1 = 8.5** and DHHD_SEX = 1 and	

	MHWDDBMI >= 22.17) or (AGEDT1 = 8.5 and DHHD_SEX = 2 and MHWDDBMI >= 22.18) or (**AGEDT1 = 9** and DHHD_SEX = 1 and MHWDDBMI >= 22.77) or (AGEDT1 = 9 and DHHD_SEX = 2 and MHWDDBMI >= 22.81) or (**AGEDT1 = 9.5** and DHHD_SEX = 1 and MHWDDBMI >= 23.39) or (AGEDT1 = 9.5 and DHHD_SEX = 2 and MHWDDBMI >= 23.46) or (**AGEDT1 = 10** and DHHD_SEX = 1 and MHWDDBMI >= 24.00) or (AGEDT1 = 10 and DHHD_SEX = 2 and MHWDDBMI >= 24.11) or (**AGEDT1 = 10.5** and DHHD_SEX = 1 and MHWDDBMI >= 24.57) or (AGEDT1 = 10.5 and DHHD_SEX = 2 and MHWDDBMI >= 24.77) or (**AGEDT1 = 11** and DHHD_SEX = 1 and MHWDDBMI >= 25.10) or (AGEDT1 = 11 and DHHD_SEX = 2 and MHWDDBMI >= 25.42) or (**AGEDT1 = 11.5** and DHHD_SEX = 1 and MHWDDBMI >= 25.58) or (AGEDT1 = 11.5 and DHHD_SEX = 2 and MHWDDBMI >= 26.05) or (**AGEDT1 = 12** and DHHD_SEX = 1 and MHWDDBMI >= 26.02) or (AGEDT1 = 12 and DHHD_SEX = 2 and MHWDDBMI >= 26.67) or (**AGEDT1 = 12.5** and DHHD_SEX = 1 and MHWDDBMI >= 26.43) or (AGEDT1 = 12.5 and DHHD_SEX = 2 and MHWDDBMI >= 27.24) or (**AGEDT1 = 13** and DHHD_SEX = 1 and MHWDDBMI >= 26.84) or (AGEDT1 = 13 and DHHD_SEX = 2 and	

	MHWDDBMI >= 27.76) or (**AGEDT1 = 13.5** and DHHD_SEX = 1 and MHWDDBMI >= 27.25) or (AGEDT1 = 13.5 and DHHD_SEX = 2 and MHWDDBMI >= 28.20) or (**AGEDT1 = 14** and DHHD_SEX = 1 and MHWDDBMI >= 27.63) or (AGEDT1 = 14 and DHHD_SEX = 2 and MHWDDBMI >= 28.57) or (**AGEDT1 = 14.5** and DHHD_SEX = 1 and MHWDDBMI >= 27.98) or (AGEDT1 = 14.5 and DHHD_SEX = 2 and MHWDDBMI >= 28.87) or (**AGEDT1 = 15** and DHHD_SEX = 1 and MHWDDBMI >= 28.30) or (AGEDT1 = 15 and DHHD_SEX = 2 and MHWDDBMI >= 29.11) or (**AGEDT1 = 15.5** and DHHD_SEX = 1 and MHWDDBMI >= 28.60) or (AGEDT1 = 15.5 and DHHD_SEX = 2 and MHWDDBMI >= 29.29) or (**AGEDT1 = 16** and DHHD_SEX = 1 and MHWDDBMI >= 28.88) or (AGEDT1 = 16 and DHHD_SEX = 2 and MHWDDBMI >= 29.43) or (**AGEDT1 = 16.5** and DHHD_SEX = 1 and MHWDDBMI >= 29.14) or (AGEDT1 = 16.5 and DHHD_SEX = 2 and MHWDDBMI >= 29.56) or (**AGEDT1 = 17** and DHHD_SEX = 1 and MHWDDBMI >= 29.41) or (AGEDT1 = 17 and DHHD_SEX = 2 and MHWDDBMI >= 29.69) or (**AGEDT1 = 17.5** and DHHD_SEX = 1 and MHWDDBMI >= 29.70) or (AGEDT1 = 17.5 and DHHD_SEX = 2 and MHWDDBMI >= 29.84) or (**AGEDT1 = 18** and DHHD_SEX = 1 and	

	MHWDDBMI >= 30.00) or (AGEDT1 = 18 and DHHD_SEX = 2 and MHWDDBMI >= 30.00)	
2	(**AGEDT1 = 2** and DHHD_SEX = 1 and (18.41 <= MHWDDBMI < 20.09)) or (AGEDT1 = 2 and DHHD_SEX = 2 and (18.02 <= MHWDDBMI < 19.81)) or (**AGEDT1 = 2.5** and DHHD_SEX = 1 and (18.13 <= MHWDDBMI < 19.80)) or (AGEDT1 = 2.5 and DHHD_SEX = 2 and (17.76 <= MHWDDBMI < 19.55)) or **(AGEDT1 = 3** and DHHD_SEX = 1 and (17.89 <= MHWDDBMI < 19.57)) or (AGEDT1 = 3 and DHHD_SEX = 2 and (17.56 <= MHWDDBMI < 19.36)) or **(AGEDT1 = 3.5** and DHHD_SEX = 1 and (17.69 <= MHWDDBMI < 19.39)) or (AGEDT1 = 3.5 and DHHD_SEX = 2 and (17.40 <= MHWDDBMI < 19.23)) or **(AGEDT1 = 4** and DHHD_SEX = 1 and (17.55 <= MHWDDBMI < 19.29)) or (AGEDT1 = 4 and DHHD_SEX = 2 and (17.28 <= MHWDDBMI < 19.15)) or **(AGEDT1 = 4.5** and DHHD_SEX = 1 and (17.47 <= MHWDDBMI < 19.26)) or (AGEDT1 = 4.5 and DHHD_SEX = 2 and (17.19 <= MHWDDBMI < 19.12)) or **(AGEDT1 = 5** and DHHD_SEX = 1 and (17.42 <= MHWDDBMI < 19.30)) or (AGEDT1 = 5 and DHHD_SEX = 2 and (17.15 <= MHWDDBMI < 19.17)) or **(AGEDT1 = 5.5** and DHHD_SEX = 1 and (17.45 <= MHWDDBMI < 19.47)) or (AGEDT1 = 5.5 and DHHD_SEX = 2 and (17.20 <= MHWDDBMI < 19.34)) or **(AGEDT1 = 6** and DHHD_SEX = 1 and (17.55 <= MHWDDBMI < 19.78)) or (AGEDT1 = 6 and DHHD_SEX = 2 and	Overweight

	(17.34 <= MHWDDBMI < 19.65)) or **(AGEDT1 = 6.5** and DHHD_SEX = 1 and (17.71 <= MHWDDBMI < 20.23)) or (AGEDT1 = 6.5 and DHHD_SEX = 2 and (17.53 <= MHWDDBMI < 20.08)) or **(AGEDT1 = 7** and DHHD_SEX = 1 and (17.92 <= MHWDDBMI < 20.63)) or (AGEDT1 = 7 and DHHD_SEX = 2 and (17.75 <= MHWDDBMI < 20.51)) or **(AGEDT1 = 7.5** and DHHD_SEX = 1 and (18.16 <= MHWDDBMI < 21.09)) or (AGEDT1 = 7.5 and DHHD_SEX = 2 and (18.03 <= MHWDDBMI < 21.01)) or **(AGEDT1 = 8** and DHHD_SEX = 1 and (18.44 <= MHWDDBMI < 21.60)) or (AGEDT1 = 8 and DHHD_SEX = 2 and (18.35 <= MHWDDBMI < 21.57)) or **(AGEDT1 = 8.5** and DHHD_SEX = 1 and (18.76 <= MHWDDBMI < 22.17)) or (AGEDT1 = 8.5 and DHHD_SEX = 2 and (18.69 <= MHWDDBMI < 22.18)) or **(AGEDT1 = 9** and DHHD_SEX = 1 and (19.10 <= MHWDDBMI < 22.77)) or (AGEDT1 = 9 and DHHD_SEX = 2 and (19.07 <= MHWDDBMI < 22.81)) or **(AGEDT1 = 9.5** and DHHD_SEX = 1 and (19.46 <= MHWDDBMI < 23.39)) or (AGEDT1 = 9.5 and DHHD_SEX = 2 and (19.45 <= MHWDDBMI < 23.46)) or **(AGEDT1 = 10** and DHHD_SEX = 1 and (19.84 <= MHWDDBMI < 24.00)) or (AGEDT1 = 10 and DHHD_SEX = 2 and (19.86 <= MHWDDBMI < 24.11)) or **(AGEDT1 = 10.5** and DHHD_SEX = 1 and (20.20 <= MHWDDBMI < 24.57)) or (AGEDT1 = 10.5 and DHHD_SEX = 2 and (20.29 <= MHWDDBMI < 24.77)) or **(AGEDT1 = 11** and DHHD_SEX = 1 and	

	(20.55 <= MHWDDBMI < 25.10)) or (AGEDT1 = 11 and DHHD_SEX = 2 and (20.74 <= MHWDDBMI < 25.42)) or **(AGEDT1 = 11.5** and DHHD_SEX = 1 and (20.89 <= MHWDDBMI < 25.58)) or (AGEDT1 = 11.5 and DHHD_SEX = 2 and (21.20 <= MHWDDBMI < 26.05)) or **(AGEDT1 = 12** and DHHD_SEX = 1 and (21.22 <= MHWDDBMI < 26.02)) or (AGEDT1 = 12 and DHHD_SEX = 2 and (21.68 <= MHWDDBMI < 26.67)) or **(AGEDT1 = 12.5** and DHHD_SEX = 1 and (21.56 <= MHWDDBMI < 26.43)) or (AGEDT1 = 12.5 and DHHD_SEX = 2 and (22.14 <= MHWDDBMI < 27.24)) or **(AGEDT1 = 13** and DHHD_SEX = 1 and (21.91 <= MHWDDBMI < 26.84)) or (AGEDT1 = 13 and DHHD_SEX = 2 and (22.58 <= MHWDDBMI < 27.76)) or **(AGEDT1 = 13.5** and DHHD_SEX = 1 and (22.27 <= MHWDDBMI < 27.25)) or (AGEDT1 = 13.5 and DHHD_SEX = 2 and (22.98 <= MHWDDBMI < 28.20)) or **(AGEDT1 = 14** and DHHD_SEX = 1 and (22.62 <= MHWDDBMI < 27.63)) or (AGEDT1 = 14 and DHHD_SEX = 2 and (23.34 <= MHWDDBMI < 28.57)) or **(AGEDT1 = 14.5** and DHHD_SEX = 1 and (22.96 <= MHWDDBMI < 27.98)) or (AGEDT1 = 14.5 and DHHD_SEX = 2 and (23.66 <= MHWDDBMI < 28.87)) or **(AGEDT1 = 15** and DHHD_SEX = 1 and (23.29 <= MHWDDBMI < 28.30)) or (AGEDT1 = 15 and DHHD_SEX = 2 and (23.94 <= MHWDDBMI < 29.11)) or **(AGEDT1 = 15.5** and DHHD_SEX = 1 and (23.60 <= MHWDDBMI < 28.60)) or (AGEDT1 = 15.5 and DHHD_SEX = 2 and	

	(24.17 <= MHWDDBMI < 29.29)) or **(AGEDT1 = 16** and DHHD_SEX = 1 and (23.90 <= MHWDDBMI < 28.88)) or (AGEDT1 = 16 and DHHD_SEX = 2 and (24.37 <= MHWDDBMI < 29.43)) or **(AGEDT1 = 16.5** and DHHD_SEX = 1 and (24.19 <= MHWDDBMI < 29.14)) or (AGEDT1 = 16.5 and DHHD_SEX = 2 and (24.54 <= MHWDDBMI < 29.56)) or **(AGEDT1 = 17** and DHHD_SEX = 1 and (24.46 <= MHWDDBMI < 29.41)) or (AGEDT1 = 17 and DHHD_SEX = 2 and (24.70 <= MHWDDBMI < 29.69)) or **(AGEDT1 = 17.5** and DHHD_SEX = 1 and (24.73 <= MHWDDBMI < 29.70)) or (AGEDT1 = 17.5 and DHHD_SEX = 2 and (24.85 <= MHWDDBMI < 29.84)) or **(AGEDT1 = 18** and DHHD_SEX = 1 and (25.00 <= MHWDDBMI < 30.00)) or (AGEDT1 = 18 and DHHD_SEX = 2 and (25.00 <= MHWDDBMI < 30.00))	
1	Else	Neither overweight nor obese

Fruit and Vegetable Consumption (8 DVs)

1) Daily consumption – fruit juice

Variable name: FVCDDJUI
Based on: FVCD_1, FVCD_1A
Previous usage:
CCHS 2.1 name: FVCCDJUI
CCHS 1.1 name: FVCADJUI
Description: This variable indicates the usual number of times per day the respondent drinks fruit juice.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times" the respondent consumed fruits or vegetables in the chosen time frame. In the Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times" followed by the "time frame". For example, the information is recorded as "2 fruit juices *(number of times)* per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (3): This variable applies to respondents aged 6 months or older.

Value of FVCDDJUI	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_1 = DK, R, NS)	Required question was not answered(don't know, refusal, not stated)
FVCD_1	FVCD_1A = 1	Number of times/day
FVCD_1 / 7 (rounded to one decimal place)	FVCD_1A = 2	Number of times/day (reported "times per week")
FVCD_1 / 30 (rounded to one decimal place)	FVCD_1A = 3	Number of times/day (reported "times per month")
FVCD_1 / 365 (rounded to one decimal place)	FVCD_1A = 4	Number of times/day (reported "times per year")
0	FVCD_1A = 5	Never drinks fruit juice

2) Daily consumption – fruit

Variable name: FVCDDFRU
Based on: FVCD_2, FVCD_2A
Previous usage:
CCHS 2.1 name: FVCCDFRU
CCHS 1.1 name: FVCADFRU
Description: This variable indicates the usual number of times per day the respondent consumes fruit, excluding fruit juices.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times" the respondent consumed fruits or vegetables in the chosen time frame. In the Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times" followed by the "time frame". For example, the information is recorded as "2 fruit juices

(number of times) per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (3): This variable applies to respondents aged 6 months or older.

Value of FVCDDFRU	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_2 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
FVCD_2	FVCD_2A = 1	Number of times/day
FVCD_2 / 7 (rounded to one decimal place)	FVCD_2A = 2	Number of times/day (reported "times per week")
FVCD_2 / 30 (rounded to one decimal place)	FVCD_2A = 3	Number of times/day (reported "times per month")
FVCD_2 / 365 (rounded to one decimal place)	FVCD_2A = 4	Number of times/day (reported "times per year")
0	FVCD_2A = 5	Never eats fruit

3) Daily consumption – green salad

Variable name: FVCDDSAL
Based on: FVCD_3, FVCD_3A
Previous usage:
CCHS 2.1 name: FVCCDSAL
CCHS 1.1 name: FVCADSAL
Description: This variable indicates the usual number of times per day the respondent eats green salad.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times" the respondent consumed fruits or vegetables in the chosen time frame. In the Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times" followed by the "time frame". For example, the information is recorded as "2 fruit juices *(number of times)* per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (3): This variable applies to respondents aged 6 months or older.

Value of FVCDDSAL	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_3 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
FVCD_3	FVCD_3A = 1	Number of times/day
FVCD_3 / 7 (rounded to one decimal place)	FVCD_3A = 2	Number of times/day (reported "times per week")
FVCD_3 / 30 (rounded to one decimal place)	FVCD_3A = 3	Number of times/day (reported "times per month")
FVCD_3 / 365 (rounded to one decimal place)	FVCD_3A = 4	Number of times/day (reported "times per year")
0	FVCD_3A = 5	Never eats green salad

4) Daily consumption – potatoes

Variable name: FVCDDPOT
Based on: FVCD_4, FVCD_4A
Previous usage:
CCHS 2.1 name: FVCCDPOT
CCHS 1.1 name: FVCADPOT
Description: This variable indicates the usual number of times per day the respondent eats potatoes, excluding french fries, fried potatoes, or potato chips.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times" the respondent consumed fruits or vegetables in the chosen time frame. In the Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times" followed by the "time frame". For example, the information is recorded as "2 fruit juices *(number of times)* per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (3): This variable applies to respondents aged 6 months or older.

Value of FVCDDPOT	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_4 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
FVCD_4	FVCD_4A = 1	Number of times/day
FVCD_4 / 7 (rounded to one decimal place)	FVCD_4A = 2	Number of times/day (reported "times per week")
FVCD_4 / 30 (rounded to one decimal place)	FVCD_4A = 3	Number of times/day (reported "times per month")
FVCD_4 / 365 (rounded to one decimal place)	FVCD_4A = 4	Number of times/day (reported "times per year")
0	FVCD_4A = 5	Never eats potatoes

5) Daily consumption – carrots

Variable name: FVCDDCAR
Based on: FVCD_5, FVCD_5A
Previous usage:
CCHS 2.1 name: FVCCDCAR
CCHS 1.1 name: FVCADCAR
Description: This variable indicates the usual number of times per day the respondent eats carrots.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times" the respondent consumed fruits or vegetables in the chosen time frame. In the Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times" followed by the "time frame". For example, the information is recorded as "2 fruit juices *(number of times)* per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (3): This variable applies to respondents aged 6 months or older.

Value of FVCDDCAR	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_5 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
FVCD_5	FVCD_5A = 1	Number of times/day
FVCD_5 / 7 (rounded to one decimal place)	FVCD_5A = 2	Number of times/day (reported "times per week")
FVCD_5 / 30 (rounded to one decimal place)	FVCD_5A = 3	Number of times/day (reported "times per month")
FVCD_5 / 365 (rounded to one decimal place)	FVCD_5A = 4	Number of times/day (reported "times per year")
0	FVCD_5A = 5	Never eats carrots

6) Daily consumption – other vegetables

Variable name: FVCDDVEG
Based on: FVCD_6, FVCD_6A
Previous usage:
CCHS 2.1 name: FVCCDVEG
CCHS 1.1 name: FVCADVEG
Description: This variable indicates the respondent's usual daily consumption of vegetables excluding carrots, potatoes, or salad. Respondents are asked to report in "servings" rather than "times" so that all different fruits and vegetables eaten at the same meal are counted. Servings should not be interpreted as referring to a specific quantity.
Note (1): In the Nutrition Survey (CCHS Cycle 2.2) the wording of questions is identical to that of previous CCHS cycles of 1.1 and 2.1. However, the sequencing of data entry by the interviewer has been modified in this survey. In previous CCHS cycles the interviewer first recorded the "time frame" (e.g. per day, per week, per month, or per year) and then recorded the "number of times/servings" the respondent consumed fruits or vegetables in the chosen time frame. In Nutrition Survey, the sequence has been reversed so that the interviewer first records the "number of times/servings" followed by the "time frame". For example, the information is recorded as "2 fruit juices *(number of times)* per week *(time frame*)". Due to the change in the sequencing of data entry in this survey, derived variable specifications of fruit and vegetable consumption are slightly different from those of previous CCHS cycles.
Note (2): This variable applies to respondents aged 6 months or older.

Value of FVCDDVEG	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	(FVCD_6 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
FVCD_6	FVCD_6A = 1	Number of servings/day
FVCD_6 / 7 (rounded to one decimal place)	FVCD_6A = 2	Number of servings /day (reported "servings per week")
FVCD_6 / 30 (rounded to one decimal place)	FVCD_6A = 3	Number of servings /day (reported "servings per month")
FVCD_6 / 365 (rounded to one decimal place)	FVCD_6A = 4	Number of servings /day (reported "servings per year")
0	FVCD_6A = 5	Never eats other vegetables

7) Daily consumption – total fruits and vegetables

Variable name: FVCDDTOT
Based on: FVCDDJUI, FVCDDFRU, FVCDDSAL, FVCDDPOT, FVCDDCAR, FVCDDVEG
Previous usage:
CCHS 2.1 name: FVCCDTOT
CCHS 1.1 name: FVCADTOT
NPHS Cycle 5 name: FV_2DTOT
Description: This variable indicates the total number of times per day the respondent eats fruits and vegetables.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): This variable applies to respondents aged 6 months or older.

Value of FVCDDTOT	Condition(s)	Description
999.6 (NA)	FVCD_1 = NA	Population exclusion
999.9 (NS)	FVCDDJUI = NS or FVCDDFRU = NS or FVCDDSAL = NS or FVCDDPOT = NS or FVCDDCAR = NS or FVCDDVEG = NS	At least one required question was not answered (don't know, refusal, not stated)
FVCDDJUI + FVCDDFRU + FVCDDSAL + FVCDDPOT + FVCDDCAR + FVCDDVEG (min: 0.0; max: 120.0)	(0 <= FVCDDJUI <= 20) and (0 <= FVCDDFRU <= 20) and (0 <= FVCDDSAL <= 20) and (0 <= FVCDDPOT <= 20) and (0 <= FVCDDCAR <= 20) and (0 <= FVCDDVEG <= 20)	Total number of times the respondent eats fruits and vegetables

8) Grouping of daily consumption – total fruit and vegetable

Variable name: FVCDGTOT
Based on: FVCDDTOT
Previous usage:
CCHS 2.1 name: FVCCGTOT
CCHS 1.1 name: FVCAGTOT
Description: This variable classifies the respondent based on the total number of times per day he/she eats fruits and vegetables.
Note (1): The CCHS measures the number of times (frequency), not the amount consumed.
Note (2): This variable applies to respondents aged 6 months or older.

Value of FVCDGTOT	Condition(s)	Description
6 (NA)	FVCDDTOT = NA	Population exclusion
9 (NS)	FVCDDTOT = NS	At least one required question was not answered (don't know, refusal, not stated)
1	FVCDDTOT < 5	Eats fruits and vegetables less than 5 times per day
2	(5 <= FVCDDTOT <= 10)	Eats fruits and vegetables between 5 and 10 times per day
3	FVCDDTOT > 10	Eats fruits and vegetables more than 10 times per day

Chronic Conditions (1 DV)

1) Has a chronic condition

Variable name: CCCDF1
Based on: CCCD_071, CCCD_101, CCCD_121, CCCD_131, CCCD_141, CCCD_171, CCCD_401, CCCD_901
Previous usage:
CCHS 2.1 Name: CCCCF1
CCHS 1.2 Name: CCCBF1
CCHS 1.1 Name: CCCAF1
NPHS Cycle 5 Name: CCC2DANY
NPHS Cycle 4 Name: CCC0DANY
NPHS Cycle 3 Name: CCC8DANY
NPHS Cycle 2 Name: CCC6DANY
NPHS Cycle 1 Name: CCC4DANY
Description: This variable indicates whether the respondent has one or more chronic health conditions which are expected to last or have already lasted six months or more and that have been diagnosed by a health professional.
Note: In previous CCHS cycles, the chronic condition variable was based on at least one positive response to more than 20 health conditions, compared to seven for this CCHS cycle. Users are cautioned to avoid direct comparisons of this variable to previous CCHS and NPHS cycles.

Value of CCCDF1	Condition(s)	Description
2	CCCD_071 = 2 and CCCD_101 = 2 and CCCD_121 = 2 and CCCD_131 = 2 and CCCD_141 = 2 and CCCD_171 = 2 and (CCCD_401 = 2, NA) and CCCD_901 = 2	Has no chronic conditions
1	CCCD_071 = 1 or CCCD_101 = 1 or CCCD_121 = 1 or CCCD_131 = 1 or CCCD_141 = 1 or CCCD_171 = 1 or CCCD_401 = 1 or CCCD_901 = 1	Has at least one chronic condition
9 (NS)	(CCCD_071 = DK, R, NS) or (CCCD_101 = DK, R, NS) or (CCCD_121 = DK, R, NS) or (CCCD_131 = DK, R, NS) or (CCCD_141 = DK, R, NS) or (CCCD_171 = DK, R, NS) or (CCCD_401 = DK, R, NS) or (CCCD_901 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

Smoking (2 DVs)

1) Type of smoker

Variable name: SMKDDSTY
Based on: SMKD_01A, SMKD_202, SMKD_05D
Previous usage:
CCHS 2.1 name: SMKCDSTY
CCHS 1.1 name: SMKADSTY
NPHS Cycle 5 name: SMC2DTYP
NPHS Cycle 4 name: SMC0DTYP
NPHS Cycle 3 name: SMC8DTYP
NPHS Cycle 2 name: SMC6DTYP
NPHS Cycle 1 name: SMC4DTYP *(formerly DVSMKT94)*
Description: This variable indicates the type of smoker the respondent is based on his/her smoking habits.
Note (1): In the Nutrition Survey (Cycle 2.2), unlike previous cycles, respondents were not asked whether they had "ever smoked a whole cigarette". This factor was therefore not included in the calculation of this derived variable.
Note (2): This variable applies to respondents aged 12 and over.

Value of SMKDDSTY	Condition(s)	Description
96 (NA)	SMKD_01A = NA	Population exclusion
1	SMKD_202 = 1	Daily smoker
2	SMKD_202 = 2 and SMKD_05D = 1	Occasional smoker (former daily smoker)
3	SMKD_202 = 2 and (SMKD_05D = 2, NA)	Occasional smoker (never a daily smoker or has smoked less than 100 cigarettes lifetime)
4	SMKD_202 = 3 and SMKD_05D = 1	Former daily smoker (non-smoker now)
5	SMKD_01A = 1 and SMKD_202 = 3 and SMKD_05D = 2	Former occasional smoker (non-smoker now)
6	SMKD_01A = 2 and SMKD_202 = 3	Never smoked
99 (NS)	(SMKD_01A = DK, R, NS) or (SMKD_202 = DK, R, NS) or (SMKD_05D = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

2) Number of years since stopping smoking completely

Variable name: SMKDDSTP
Based on: SMKD_06A, SMKD_09A, SMKD_10, SMKD_10A, SMKDDSTY
Previous usage:
CCHS 2.1 name: SMKCDSTP
Description: This variable indicates the approximate number of years since former smokers completely quit smoking.
Note (1): Current smokers and respondents who did not smoke a total of 100 cigarettes or more in their lifetime were excluded from the population.
Note (2): This derived variable is very similar to the Cycle 2.1 derived variable except for the fact that in the Nutrition Survey (Cycle 2.2), the category of "number of years" since respondents quit smoking stops at three years. In Cycle 2.1, this derived variable includes information about the number of years up to 125 years.
Note (3): This variable applies to respondents aged 12 and over.

Value of SMKDDSTP	Condition(s)	Description
6 (NA)	(SMKDDSTY = 1, 2, 3, 6, NA)	Population exclusion
9 (NS)	SMKDDSTY = NS or (SMKD_10 = DK, R, NS) or (SMKD_06A = DK, R, NS) or (SMKD_09A = DK, R, NS) or (SMKD_10A = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
0 (less than 1 year)	SMKD_06A = 1 or (SMKD_10 = 1 and SMKD_09A = 1) or SMKD_10A = 1	Number of years since completely quit smoking
1 (1 year to < 2 years)	SMKD_06A = 2 or (SMKD_10 = 1 and SMKD_09A = 2) or SMKD_10A = 2	
2 (2 years to < 3 years)	SMKD_06A = 3 or (SMKD_10 = 1 and SMKD_09A = 3) or SMKD_10A = 3	
3 (3 years or more)	SMKD_06A = 4 or (SMKD_10 = 1 and SMKD_09A = 4) or SMKD_10A = 4	

Food Security (1 DV)

1) Household food security status

Variable name: FSCDDHFS
Based on: FSCD_020, FSCD_030, FSCD_040, FSCD_050, FSCD_060, FSCD_070, FSCD_080, FSCD_081, FSCD_090, FSCD_100, FSCD_110, FSCD_120, FSCD_121, FSCD_130, FSCD_140, FSCD_141, FSCD_150, FSCD_160
Previous usage: This is a new derived variable.
Description: This variable is based on a set of 18 questions and indicates whether households both with and without children were able to afford the food they needed in the previous 12 months. It captures four kinds of situations:

> **1 – Food secure:** Household members show no or minimal evidence of food insecurity.
> **2 – Food insecure without hunger:** Household members feel anxious about running out of food or compromise on the quality of foods they eat by choosing less expensive options. Little or no reduction in the household members' food intake is reported.
> **3 – Food insecure with MODERATE hunger:** Food intake for adults in the household has been reduced to an extent that implies that adults have repeatedly experienced the physical sensation of hunger. In most (but not all) food insecure households with children, such reductions are not observed at this stage for children.
> **4 – Food insecure with SEVERE hunger:** At this level, all households with children have reduced the children's food intake to an extent indicating that the children have experienced hunger. Adults in households with and without children have repeatedly experienced more extensive reductions in food intake.

Note (1): The model for "household food security status levels" is adopted from the U.S. model of food security status levels published by U.S. Department of Agriculture in 2000. For more information about this model, please see Bickel, Gary, Mark Nord, Cristofer Price, William Hamilton, and John Cook, *Guide to Measuring Household Food Security, Revised 2000* (available online at: www.ers.usda.gov/briefing/foodsecurity).
Note (2): Households with children are defined as households with individuals aged 15 and less and/ or with individuals aged 16 or 17 who are the child or grandchild of another household member.

Temporary variables

Condition(s)	Description
If DHHDDYKD = 0 and DHHDDOKD = 0, then DHHDTKDS = 0	Set value to 0 to indicate households WITHOUT children
Else, DHHDTKDS = 1	Set value to 1 to indicate households WITH children

Temporary variables

Condition(s)	Description
If FSCD_020 = 3, then FSCDT020 = 0 If (FSCD_020 = 1 or 2), then FSCDT020 = 1	➢ Set the value to 0 if respondent did not provide an "affirmative"* response to food security questions ➢ Set the value to 1, if respondent did provide an "affirmative" response ***Note:** In order to determine household food security status, responses to each question is first coded as either "affirmative" or "negative". Some of this coding is obvious because the only response options are "yes" or "no". For questions with less obvious response categories, the procedure for coding is as follows: response categories such as "Often true", "Sometimes true", "Almost every month", "Some months but not every month" are coded as "affirmative" (i.e. coded equal to 1). Response categories such as "Never true", "Only 1 or 2 months" are coded as "negative" (i.e. coded equal to 0)
If FSCD_030 = 3, then FSCDT030 = 0 If (FSCD_030 = 1 or 2), then FS030 = 1	
If FSCD_040 = 3, then FSCDT040 = 0 If (FSCD_040 = 1 or 2), then FSCD040 = 1	
If (FSCD_050 = 3 or NA), then FSCDT050 = 0 If (FSCD_050 = 1 or 2), then FSCDT050 = 1	
If (FSCD_060 = 3 or NA), then FSCDT060 = 0 If (FSCD_060 = 1 or 2), then FSCD060 = 1	
If (FSCD_070 = 3 or NA), then FSCDT1070 = 0 If (FSCD_070 = 1 or 2), then FSCDT070 = 1	
If (FSCD_080 = 2 or NA), then FSCDT080 = 0 If FSCD_080 = 1, then FSCDT080 = 1	
If (FSCD_081 = 3 or NA), then FSCDT081 = 0 If (FSCD_081 = 1 or 2), then FSCDT081 = 1	
If (FSCD_090 = 2 or NA), then FSCDT090 = 0 If FSCD_090 = 1, then FSCDT090 = 1	
If (FSCD_100 = 2 or NA), then FSCDT100 = 0 If FSCD_100 = 1, then FSCDT100 = 1	
If (FSCD_110 = 2 or NA), then FSCDT110 = 0 If FSCD_110 = 1, then FSCDT110 = 1	
If (FSCD_120 = 2 or NA), then FSCDT120 = 0 If FSCD_120 = 1, then FSCDT120 = 1	
If (FSCD_121 = 3 or NA), then FSCDT121 = 0 If (FSCD_121 = 1 or 2), then FSCDT121 = 1	
If (FSCD_130 = 2 or NA), then FSCDT130 = 0 If FSCD_130 = 1, then FSCDT130 = 1	
If (FSCD_140 = 2 or NA), then FSCDT140 = 0 If FSCD_140 = 1, then FSCDT1140 = 1	
If (FSCD_141 = 3 or NA), then FSCDT141 = 0 If (FSCD_141 = 1 or 2), then FSCDT141 = 1	
If (FSCD_150 = 2 or NA), then FSCDT150 = 0 If FSCD_150 = 1, then FSCDT150 = 1	
If (FSCD_160 = 2 or NA), then FSCDT160 = 0 If FSCD_160 = 1, then FSCDT160 = 1	
FSCDTSUM = FSCDT020 + FSCDT030 + FSCDT040 + FSCDT050 + FSCDT060 + FSCDT070 + FSCDT080 + FSCDT081 + FSCDT090 + FSCDT100 + FSCDT110 + FSCDT120 + FSCDT121 + FSCDT130 + FSCDT140 + FSCDT141 + FSCDT150 + FSCDT160 (Min: 0; Max: 18)	Sum of all temporary variables to be used in determining the level of household food insecurity Total will range from 0 to 18

Food security status categories

FSCDDHFS	Condition(s)	Description
9 (NS)	(FSCD_020 = DK, R, NS) or (FSCD_030 = DK, R, NS) or (FSCD_040 = DK, R, NS) or (FSCD_050 = DK, R, NS) or (FSCD_060 = DK, R, NS) or (FSCD_070 = DK, R, NS) or (FSCD_080 = DK, R, NS) or (FSCD_081 = DK, R, NS) or (FSCD_090 = DK, R, NS) or (FSCD_100 = DK, R, NS) or (FSCD_110 = DK, R, NS) or (FSCD_120 = DK, R, NS) or (FSCD_121 = DK, R, NS) or (FSCD_130 = DK, R, NS) or (FSCD_140 = DK, R, NS) or (FSCD_141 = DK, R, NS) or (FSCD_150 = DK, R, NS) or (FSCD_160 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
0	0 <= FSCDTSUM <= 2	Food secure
1	(DHHDTKDS = 1 and 3 <= FSCDTSUM <= 7) or (DHHDTKDS = 0 and 3 <= FSCDTSUM <= 5)	Food insecure without hunger
2	(DHHDTKDS = 1 and 8 <= FSCDTSUM <= 12) or (DHHDTKDS = 0 and 6 <= FSCDTSUM <= 8)	Food insecure with moderate hunger
3	(DHHDTKDS = 1 and 13 <= FSCDTSUM <= 18) or (DHHDTKDS = 0 and 9 <= FSCDTSUM <= 10)	Food insecure with severe hunger

Socio-Demographic Characteristics (8 DVs)

1) Country of birth code

Variable name: SDCDCCB
Based on: SDCD_1, SDCD_1S
Previous usage:
CCHS 2.1 name: SDCCCCB
CCHS 1.2 name: SDCBCCB
CCHS 1.1 name: SDCACCB
NPHS Cycle 5 name: C0CB
NPHS Cycle 4 name: C0CB
NPHS Cycle 3 name: SDC8CB
NPHS Cycle 2 name: SDC6CB
Description: This variable gives the respondent's country of birth.
Note: Coded automatically from SDCD_1 and SDCD_1S ("other specify" write-in answer) using Reference file from the census.

2) Country of birth – grouped

Variable name: SDCDGCB
Based on: SDCDCCB
Previous usage:
CCHS 2.1 name: SDCCGCB
CCHS 1.2 name: SDCBGCB
CCHS 1.1 name: SDCAGCB
NPHS Cycle 5 name: COBGC
NPHS Cycle 4 name: COBGC
NPHS Cycle 3 name: SDC8GCB
NPHS Cycle 2 name: SDC6GCB
Description: This variable classifies the respondent based on his/her country of birth in specific groups.

Value of SDCDGCB	Condition(s)	Description
99 (NS)	(SDCDCCB = 000, 995, DK, R, NS, Missing)	Required question was not answered (don't know, refusal, not stated)
1	0 < SDCDCCB < 14	Canada
2	100 <= SDCDCCB < 200 or SDCDCCB = 206	Other North America
3	200 < SDCDCCB < 206 or 206 < SDCDCCB < 500	South, Central America and Caribbean
4	500 <= SDCDCCB < 600	Europe
5	600 <= SDCDCCB < 700	Africa
6	700 <= SDCDCCB < 800	Asia
7	800 <= SDCDCCB < 900	Oceania

3) Age at time of immigration

Variable name: SDCDDAIM
Based on: SDCD_3, DHHD_YOB
Previous usage:
CCHS 2.1 name: SDCCDAIM
CCHS 1.2 name: SDCBDAIM
CCHS 1.1 name: SDCADAIM
NPHS Cycle 5 name: AOI
NPHS Cycle 4 name: AOI
NPHS Cycle 3 name: SDC8DAIM
NPHS Cycle 2 name: SDC6DAIM
NPHS Cycle 1 name: SDC4DAIM *(formerly DVAGIM94)*
Description: This variable indicates the age of the respondent at the time of immigration.
Note: Non-immigrants were excluded from the population.

Value of SDCDDAIM	Condition(s)	Description
996 (NA)	SDCD_3 = NA	Population exclusion
999 (NS)	(SDCD_3 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
SDCD_3 – DHHD_YOB (min: 0; max: 130 (current age))	SDCD_3 < NA	Age at time of immigration

4) Immigration flag

Variable name: SDCDFIMM
Based on: SDCD_3
Previous usage:
CCHS 2.1 name: SDCCFIMM
CCHS 1.2 name: SDCBFIMM
CCHS 1.1 name: SDCAFIMM
NPHS Cycle 5 name: IMM
NPHS Cycle 4 name: IMM
NPHS Cycle 3 name: SDC8FIMM
NPHS Cycle 2 name: SDC6FIMM
NPHS Cycle 1 name: SDC4FIMM
Description: This variable indicates if the respondent is an immigrant.

Value of SDCDFIMM	Condition(s)	Description
9 (NS)	(SDCD_3 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
2	SDCD_3 = NA	Not an immigrant
1	SDCD_3 < NA	Immigrant

5) Length of time in Canada since immigration

Variable name: SDCDDRES
Based on: SDCD_3, ADMD_YOI
Previous usage:
CCHS 2.1 name: SDCCDRES
CCHS 1.2 name: SDCBDRES
CCHS 1.1 name: SDCADRES
NPHS Cycle 5 name: SDC2DRES
NPHS Cycle 4 name: SDC0DRES
NPHS Cycle 3 name: SDC8DRES
NPHS Cycle 2 name: SDC6DRES
NPHS Cycle 1 name: SDC4DRES
Description: This variable indicates the length of time the respondent has been in Canada since his/her immigration.
Note: Non-immigrants were excluded from the population.

Value of SDCDDRES	Condition(s)	Description
996 (NA)	SDCD_3 = NA	Population exclusion
999 (NS)	(SDCD_3 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
ADMD_YOI – SDCD_3 (min: 0; max: 130 (current age))	SDCD_3 < NA	Length of time in Canada since immigration

6) Language(s) in which respondent can converse

Variable name: SDCDDLNG
Based on: SDCD_5A, SDCD_5B, SDCD_5C, SDCD_5D, SDCD_5E, SDCD_5F, SDCD_5G, SDCD_5H, SDCD_5I, SDCD_5J, SDCD_5K, SDCD_5L, SDCD_5M, SDCD_5N, SDCD_5O, SDCD_5P, SDCD_5Q, SDCD_5R, SDCD_5S, SDCD_5T, SDCD_5U, SDCD_5V, SDCD_5W
Previous usage:
CCHS 2.1 name: SDCCDLNG
CCHS 1.2 name: SDCBDLNG
CCHS 1.1 name: SDCADLNG
NPHS Cycle 5 name: SDC2DLNG
NPHS Cycle 4 name: SDC0DLNG
NPHS Cycle 3 name: SDC8DLNG
NPHS Cycle 2 name: SDC6DLNG
NPHS Cycle 1 name: SDC4DLNG *(Formerly DVLANG94)*
Description: This variable indicates the language(s) in which the respondent can converse.

Value of SDCDDLNG	Condition(s)	Description
99 (NS)	(SDCD_5A =DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	SDCD_5A = 1 and SDCD_5B > 1 and SDCD_5C > 1 and SDCD_5D >1 and SDCD_5E > 1 and SDCD_5F > 1 and SDCD_5G > 1 and SDCD_5H > 1 and	English only

	SDCD_5I > 1 and SDCD_5J > 1 and SDCD_5K > 1 and SDCD_5L > 1 and SDCD_5M > 1 and SDCD_5N > 1 and SDCD_5O > 1 and SDCD_5P > 1 and SDCD_5Q > 1 and SDCD_5R > 1 and SDCD_5S > 1 and SDCD_5T > 1 and SDCD_5U > 1 and SDCD_5V > 1 and SDCD_5W > 1	
2	SDCD_5A > 1 and SDCD_5B = 1 and SDCD_5C > 1 and SDCD_5D > 1 and SDCD_5E > 1 and SDCD_5F > 1 and SDCD_5G > 1 and SDCD_5H > 1 and SDCD_5I > 1 and SDCD_5J > 1 and SDCD_5K > 1 and SDCD_5L > 1 and SDCD_5M > 1 and SDCD_5N > 1 and SDCD_5O > 1 and SDCD_5P > 1 and SDCD_5Q > 1 and SDCD_5R > 1 and SDCD_5S > 1 and SDCD_5T > 1 and SDCD_5U > 1 and SDCD_5V > 1 and SDCD_5W > 1	French only
3	SDCD_5A = 1 and SDCD_5B = 1 and SDCD_5C > 1 and SDCD_5D > 1 and SDCD_5E > 1 and SDCD_5F > 1 and SDCD_5G > 1 and SDCD_5H > 1 and SDCD_5I > 1 and SDCD_5J > 1 and SDCD_5K > 1 and SDCD_5L > 1 and SDCD_5M > 1 and SDCD_5N > 1 and SDCD_5O > 1 and SDCD_5P > 1 and SDCD_5Q > 1 and SDCD_5R > 1 and SDCD_5S > 1 and	English and French only

	SDCD_5T > 1 and SDCD_5U > 1 and SDCD_5V > 1 and SDCD_5W > 1	
4	(SDCD_5A = 1 and SDCD_5B = 1) and (SDCD_5C = 1 or SDCD_5D = 1 or SDCD_5E = 1 or SDCD_5F = 1 or SDCD_5G = 1 or SDCD_5H = 1 or SDCD_5I = 1 or SDCD_5J = 1 or SDCD_5K = 1 or SDCD_5L = 1 or SDCD_5M = 1 or SDCD_5N = 1 or SDCD_5O = 1 or SDCD_5P = 1 or SDCD_5Q = 1 or SDCD_5R = 1 or SDCD_5S = 1 or SDCD_5T = 1 or SDCD_5U = 1 or SDCD_5V = 1 or SDCD_5W = 1)	English, French and Other
5	(SDCD_5A = 1 and SDCD_5B > 1) and (SDCD_5C = 1 or SDCD_5D = 1 or SDCD_5E = 1 or SDCD_5F = 1 or SDCD_5G = 1 or SDCD_5H = 1 or SDCD_5I = 1 or SDCD_5J = 1 or SDCD_5K = 1 or SDCD_5L = 1 or SDCD_5M = 1 or SDCD_5N = 1 or SDCD_5O = 1 or SDCD_5P = 1 or SDCD_5Q = 1 or SDCD_5R = 1 or SDCD_5S = 1 or SDCD_5T = 1 or SDCD_5U = 1 or SDCD_5V = 1 or SDCD_5W = 1)	English and Other (not French)
6	(SDCD_5A > 1 and SDCD_5B = 1) and (SDCD_5C = 1 or SDCD_5D = 1 or SDCD_5E = 1 or SDCD_5F = 1 or SDCD_5G = 1 or	French and Other (not English)

	SDCD_5H = 1 or SDCD_5I = 1 or SDCD_5J = 1 or SDCD_5K = 1 or SDCD_5L = 1 or SDCD_5M = 1 or SDCD_5N = 1 or SDCD_5O = 1 or SDCD_5P = 1 or SDCD_5Q = 1 or SDCD_5R = 1 or SDCD_5S = 1 or SDCD_5T = 1 or SDCD_5U = 1 or SDCD_5V = 1 or SDCD_5W = 1)	
7	(SDCD_5A > 1 and SDCD_5B > 1) and (SDCD_5C = 1 or SDCD_5D = 1 or SDCD_5E = 1 or SDCD_5F = 1 or SDCD_5G = 1 or SDCD_5H = 1 or SDCD_5I = 1 or SDCD_5J = 1 or SDCD_5K = 1 or SDCD_5L = 1 or SDCD_5M = 1 or SDCD_5N = 1 or SDCD_5O = 1 or SDCD_5P = 1 or SDCD_5Q = 1 or SDCD_5R = 1 or SDCD_5S = 1 or SDCD_5T = 1 or SDCD_5U = 1 or SDCD_5V = 1 or SDCD_5W = 1)	Other (neither English nor French)

7) Cultural or racial origin

Variable name: SDCDDRAC
Based on: SDCD_7A, SDCD_7B, SDCD_7C, SDCD_7D, SDCD_7E, SDCD_7F, SDCD_7G, SDCD_7H, SDCD_7I, SDCD_7J, SDCD_7K, SDCD_7L, SDCD_7M
Previous usage:
CCHS 2.1 name: SDCCDRAC
CCHS 1.2 name: SDCBDRAC
CCHS 1.1 name: SDCADRAC
NPHS Cycle 4 name: SDC0DRAC
NPHS Cycle 3 name: SDC8DRAC
NPHS Cycle 2 name: SDC6DRAC
NPHS Cycle 1 name: SDC4DRAC *(formerly DVRACE94)*
Description: This variable indicates the ethnic, cultural or racial origin of the respondent.

Value of SDCDDRAC	Condition(s)	Description
99 (NS)	(SDCD_7A= DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	SDCD_7A = 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	White only
2	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D = 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	Black only
3	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K = 1 and	Korean only

	SDCD_7L > 1 and SDCD_7M > 1	
4	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E = 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M >1	Filipino only
5	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J = 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	Japanese only
6	SDCD_7A > 1 and SDCD_7B = 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	Chinese only
7	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L = 1 and SDCD_7M > 1	Aboriginal only
8	SDCD_7A > 1 and SDCD_7B > 1 and	South Asian only

	SDCD_7C = 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	
9	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G = 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	Southeast Asian only
10	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H = 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	Arab only
11	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I = 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	West Asian only
12	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F = 1 and	Latin American only

	SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M > 1	
13	SDCD_7A > 1 and SDCD_7B > 1 and SDCD_7C > 1 and SDCD_7D > 1 and SDCD_7E > 1 and SDCD_7F > 1 and SDCD_7G > 1 and SDCD_7H > 1 and SDCD_7I > 1 and SDCD_7J > 1 and SDCD_7K > 1 and SDCD_7L > 1 and SDCD_7M = 1	Other racial or cultural origin (only)
14	More than one category answered	Multiple racial or cultural origins

8) First official language learned and still understood

Variable name: SDCDDFL1
Based on: SDCD_6A, SDCD_6B, SDCD_6C, SDCD_6D, SDCD_6E, SDCD_6F, SDCD_6G, SDCD_5H, SDCD_6I, SDCD_6J, SDCD_6K, SDCD_6L, SDCD_6M, SDCD_6N, SDCD_6O, SDCD_6P, SDCD_6Q, SDCD_6R, SDCD_6S, SDCD_6T, SDCD_6U, SDCD_6V, SDCD_6W
Previous usage:
CCHS 2.1 name: SDCCDFL1
Description: This variable indicates the first official language spoken and still understood by the respondent.

Value of SDCDDFL1	Condition(s)	Description
99 (NS)	(SDCD_6A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	SDCD_6A = 1 and SDCD_6B > 1 and SDCD_6C > 1 and SDCD_6D > 1 and SDCD_6E > 1 and SDCD_6F > 1 and SDCD_6G > 1 and SDCD_6H > 1 and SDCD_6I > 1 and SDCD_6J > 1 and SDCD_6K > 1 and SDCD_6L > 1 and SDCD_6M > 1 and SDCD_6N > 1 and SDCD_6O > 1 and SDCD_6P > 1 and SDCD_6Q > 1 and SDCD_6R > 1 and	English only

	SDCD_6S > 1 and SDCD_6T > 1 and SDCD_6U > 1 and SDCD_6V > 1 and SDCD_6W > 1	
2	SDCD_6A > 1 and SDCD_6B = 1 and SDCD_6C > 1 and SDCD_6D > 1 and SDCD_6E > 1 and SDCD_6F > 1 and SDCD_6G > 1 and SDCD_6H > 1 and SDCD_6I > 1 and SDCD_6J > 1 and SDCD_6K > 1 and SDCD_6L > 1 and SDCD_6M > 1 and SDCD_6N > 1 and SDCD_6O > 1 and SDCD_6P > 1 and SDCD_6Q > 1 and SDCD_6R > 1 and SDCD_6S > 1 and SDCD_6T > 1 and SDCD_6U > 1 and SDCD_6V > 1 and SDCD_6W > 1	French only
3	(SDCD_6A = 1 and SDCD_6B = 1) and SDCD_6C > 1 and SDCD_6D > 1 and SDCD_6E > 1 and SDCD_6F > 1 and SDCD_6G > 1 and SDCD_6H > 1 and SDCD_6I > 1 and SDCD_6J > 1 and SDCD_6K > 1 and SDCD_6L > 1 and SDCD_6M > 1 and SDCD_6N > 1 and SDCD_6O > 1 and SDCD_6P > 1 and SDCD_6Q > 1 and SDCD_6R > 1 and SDCD_6S > 1 and SDCD_6T > 1 and SDCD_6U > 1 and SDCD_6V > 1 and SDCD_6W > 1	English and French only
4	(SDCD_6A = 1 and SDCD_6B = 1) and (SDCD_6C = 1 or SDCD_6D = 1 or SDCD_6E = 1 or SDCD_6F = 1 or	English, French and Other

	SDCD_6G = 1 or SDCD_6H = 1 or SDCD_6I = 1 or SDCD_6J = 1 or SDCD_6K = 1 or SDCD_6L = 1 or SDCD_6M = 1 or SDCD_6N = 1 or SDCD_6O = 1 or SDCD_6P = 1 or SDCD_6Q = 1 or SDCD_6R = 1 or SDCD_6S = 1 or SDCD_6T = 1 or SDCD_6U = 1 or SDCD_6V = 1 or SDCD_6W = 1)	
5	(SDCD_6A = 1 and SDCD_6B > 1) and (SDCD_6C = 1 or SDCD_6D = 1 or SDCD_6E = 1 or SDCD_6F = 1 or SDCD_6G = 1 or SDCD_6H = 1 or SDCD_6I = 1 or SDCD_6J = 1 or SDCD_6K = 1 or SDCD_6L = 1 or SDCD_6M = 1 or SDCD_6N = 1 or SDCD_6O = 1 or SDCD_6P = 1 or SDCD_6Q = 1 or SDCD_6R = 1 or SDCD_6S = 1 or SDCD_6T = 1 or SDCD_6U = 1 or SDCD_6V = 1 or SDCD_6W = 1)	English and Other (not French)
6	(SDCD_6A > 1 and SDCD_6B = 1) and (SDCD_6C = 1 or SDCD_6D = 1 or SDCD_6E = 1 or SDCD_6F = 1 or SDCD_6G = 1 or SDCD_6H = 1 or SDCD_6I = 1 or SDCD_6J = 1 or SDCD_6K = 1 or SDCD_6L = 1 or SDCD_6M = 1 or SDCD_6N = 1 or SDCD_6O = 1 or SDCD_6P = 1 or SDCD_6Q = 1 or	French and Other (not English)

	SDCD_6R = 1 or SDCD_6S = 1 or SDCD_6T = 1 or SDCD_6U = 1 or SDCD_6V = 1 or SDCD_6W = 1)	
7	(SDCD_6A > 1 and SDCD_6B > 1) and (SDCD_6C = 1 or SDCD_6D = 1 or SDCD_6E = 1 or SDCD_6F = 1 or SDCD_6G = 1 or SDCD_6H = 1 or SDCD_6I = 1 or SDCD_6J = 1 or SDCD_6K = 1 or SDCD_6L = 1 or SDCD_6M = 1 or SDCD_6N = 1 or SDCD_6O = 1 or SDCD_6P = 1 or SDCD_6Q = 1 or SDCD_6R = 1 or SDCD_6S = 1 or SDCD_6T = 1 or SDCD_6U = 1 or SDCD_6V = 1 or SDCD_6W = 1)	Other (neither English nor French)

Education Variables (4 DVs)

1) Highest level of education – respondent, 10 levels

Variable name: EDUDDR10
Based on: EDUD_1, EDUD_2, EDUD_3, EDUD_4
Previous usage:
CCHS 2.1 name: EDUCDR10
CCHS 1.2 name: EDUBDR10
CCHS 1.1 name: EDUADR10
Description: This variable indicates the highest level of education acquired by the respondent.

Value of EDUDDR10	Condition(s)	Description
1	EDUD_1 = 1 and EDUD_3 = 2	Grade 8 or lower (Québec: Secondary II or lower)
2	EDUD_1 = 2 and EDUD_3 = 2	Grade 9-10 (Québec: Secondary III or IV; Newfoundland & Labrador: 1st year of secondary)
3	EDUD_1 = 3 and EDUD_2 = 2 and EDUD_3 = 2	Grade 11-13 (Québec: Secondary V; Newfoundland & Labrador: 2nd to 4th year of secondary)
4	EDUD_2 = 1 and EDUD_3 = 2	Secondary school graduate, no post-secondary education
5	EDUD_4 = 1	Some post secondary education
6	EDUD_4 = 2	Trade certificate or diploma from a vocational school or apprenticeship training
7	EDUD_4 = 3	Non-university certificate or diploma from a community college, CEGEP, school of nursing, etc.
8	EDUD_4 = 4	University certificate below bachelor's level
9	EDUD_4 = 5	Bachelor's degree
10	EDUD_4 = 6	University degree or certificate above bachelor's degree
99 (NS)	[(EDUD_1 = DK, R, NS) and EDUD_2 = 2] or (EDUD_2 = DK, R, NS) or (EDUD_3 = DK, R, NS) or (EDUD_4 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

2) Highest level of education – respondent, 4 levels

Variable name: EDUDDR04
Based on: EDUD_1, EDUD_2, EDUD_3, EDUD_4
Previous usage:
CCHS 2.1 name: EDUCDR04
CCHS 1.2 name: EDUBDR04
CCHS 1.1 name: EDUADR04
Description: This variable indicates the highest level of education acquired by the respondent.

Value of EDUDDR04	Condition(s)	Description
1	[(EDUD_1 = 1, 2) or EDUD_2 = 2] and EDUD_3 = 2	Less than secondary school graduation
2	EDUD_2 = 1 and EDUD_3 = 2	Secondary school graduation, no post-secondary education
3	EDUD_4 = 1	Some post-secondary education
4	(2 <= EDUD_4 <= 6)	Post-secondary degree/diploma
9 (NS)	(EDUD_2 = DK, R, NS) or (EDUD_3 = DK, R, NS) or (EDUD_4 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

3) Highest level of education – household, 10 levels

Variable name: EDUDDH10
Based on: EDUDDR10 for each member of the household
Previous usage:
CCHS 2.1 name: EDUCDH10
CCHS 1.2 name: EDUBDH10
CCHS 1.1 name: EDUADH10
Description: This variable indicates the highest level of education acquired by any member of the household.
Note: This variable is derived by temporarily creating EDUDDR10 for each member of the household (all PERSONID within SAMPLEID), then by comparing these values of EDUDDR10 within the household and by returning the highest value. If any PERSONID has EDUDDR10 of NS (not stated) then NS is returned. If all of EDUDDR10 are NA (not applicable) then NA is returned.

4) Highest level of education – household, 4 levels

Variable name: EDUDDH04
Based on: EDUDDR04 for each member of the household
Previous usage:
CCHS 2.1 name: EDUCDH04
CCHS 1.2 name: EDUBDH04
CCHS 1.1 name: EDUADH04
Description: This variable indicates the highest level of education acquired by any member of the household.
Note: This variable is derived by temporarily creating EDUDDR04 for each member of the household (all PERSONID within SAMPLEID), then by comparing these values of EDUDDR04 within the household and by returning the highest value. If any PERSONID has EDUDDR04 of NS (not stated) then NS is returned. If all of EDUDDR04 are NA (not applicable) then NA is returned.

Labour Force (8 DVs)

1) Working status last week (short form)

Variable name: LBFDDWSS
Based on: LBFD_01, LBFD_02
Previous usage:
CCHS 2.1 name: LBFCDWSS
CCHS 1.2 name: LBFBDWSS
CCHS 1.1 name: LBFADWSS
NPHS Cycle 5 name: LSC2DCWS
NPHS Cycle 4 name: LSC0DCWS
Description: This variable classifies the respondent based on his/her working status in the week prior to the interview.
Note: Respondents aged less than 15 or more than 75 years old have been excluded from the population.

Value of LBFDDWSS	Condition(s)	Description
6 (NA)	LBFD_01 = NA	Population exclusion
1	LBFD_01 = 1	Worked at a job or business
2	LBFD_02 = 1	Had a job but did not work (absent)
3	LBFD_02 = 2	Did not have a job
4	LBFD_01 = 3	Permanently unable to work
9 (NS)	(LBFD_02 = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)

2) Working status last week (long form)

Variable name: LBFDDWSL
Based on: LBFD_01, LBFD_11, LBFD_41
Previous usage:
CCHS 2.1 name: LBFCDWSL
CCHS 1.2 name: LBFBDWSL
CCHS 1.1 name: LBFADWSL
Description: This variable classifies the respondent based on his/her working status in the week prior to the interview and also includes grouping for reasons of not working.
Note: Respondents aged less than 15 or more than 75 years old have been excluded from the population.

Value of LBFDDWSL	Condition(s)	Description
96 (NA)	LBFD_01 = NA	Population exclusion
1	LBFD_01 = 1	Worked at a job or business
2	(LBFD_41 = 8, 9, 10, 12, 13)	Had a job – on temporary or seasonal layoff
3	(0 < LBFD_41 < 8) or LBFD_41 = 11 or (13 < LBFN_41 < NA)	Had a job – absent for some other reason
4	LBFD_11 = 1	Did not have a job – looked for work over past 4 weeks
5	LBFD_11 = 2	Did not have a job – did not look for work over past 4 weeks
6	LBFD_01 = 3	Permanently unable to work
99 (NS)	(LBFD_11 = DK, R, NS) or (LBFD_41 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

3) Main reason for not working last week

Variable name: LBFDDRNW
Based on: LBFD_01, LBFD_11, LBFD_13, LBFD_41
Previous usage:
CCHS 2.1 name: LBFCDRNW
CCHS 1.2 name: LBFBDRNW
CCHS 1.1 name: LBFADRNW
Description: This variable indicates the main reason why the respondent did not work in the week prior to the interview.
Note: Respondents aged less than 15 or more than 75 years old or who did not work the week preceding the interview have been excluded from the population.

Value of LBFDDRNW	Condition(s)	Description
96 (NA)	LBFD_01 = 1, NA	Population exclusion
99 (NS)	(LBFD_11 = DK, R, NS) or (LBFD_13 = DK, R, NS) or (LBFD_41 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
1	LBFD_01 = 3	Permanently unable to work
2	LBFD_13 = 1 or LBFD_41 = 1	Own illness or disability
3	LBFD_13 = 2 or LBFD_41 = 2	Caring for – own children
4	LBFD_13 = 3 or LBFD_41 = 3	Caring for – elder relative
5	LBFD_13 = 4 or LBFD_41 = 4	Pregnancy/ maternity leave
6	LBFD_13 = 5 or LBFD_41 = 5	Other personal or family responsibilities
7	LBFD_13 = 6 or LBFD_41 = 6	Vacation
8	LBFD_13 = 7 or LBFD_41 = 14	School or educational leave
9	LBFD_13 = 8	Retired
10	LBFD_13 = 9	Believes no work is available (in area or suited to skills)
11	LBFD_41 = 7	Labour dispute
12	LBFD_41 = 8	Temporary layoff due to business conditions
13	LBFD_41 = 9	Seasonal layoff
14	LBFD_41 = 10	Casual job, no work available
15	LBFD_41 = 12	Self-employed, no work available
16	LBFD_41 = 13	Seasonal business
17	LBFD_11 = 1	Looking for work
18	LBFD_41 = 11	Work schedule
19	LBFD_13 = 10 or LBFD_41 = 15	Other reason

4) Multiple job status

Variable name: LBFDDMJS
Based on: LBFD_03, LBFD_21, LBFD_23, LBFD_51
Previous usage:
CCHS 2.1 name: LBFCDMJS
CCHS 1.2 name: LBFBDMJS
CCHS 1.1 name: LBFADMJS
NPHS Cycle 5 name: LSC2DMJS
NPHS Cycle 4 name: LSC0DMJS
Description: This variable classifies respondents based on whether or not they had multiple jobs in the past year and if they still do.
Note: Respondents aged less than 15 or more than 75 years old have been excluded from the population.

Value of LBFDDMJS	Condition(s)	Description
6 (NA)	LBFD_01 = NA	Population exclusion
1	LBFD_51 = 52	Currently has multiple jobs – had them all past year
2	LBFD_03 = 1 and LBFD_51 < 52	Currently has multiple jobs – did not have them all past year
3	LBFD_03 = 2	Currently has only one job
4	LBFD_23 = 1	Currently does not have a job – held multiple jobs over past year
5	LBFD_23 = 2 or LBFD_21 = 2	Currently does not have a job – did not hold multiple jobs over the year
9 (NS)	(LBFD_03 = DK, R, NS) or (LBFD_21 = DK, R, NS) or (LBFD_23 = DK, R, NS) or (LBFD_51 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

5) Total usual hours worked per week

Variable name: LBFDDHPW
Based on: LBFD_42, LBFD_53
Previous usage:
CCHS 2.1 name: LBFCDHPW
CCHS 1.2 name: LBFBDHPW
CCHS 1.1 name: LBFADHPW
NPHS Cycle 5 name: LSC2DHPW
NPHS Cycle 4 name: LSC0DHPW
Description: This variable indicates the total number of hours the respondent worked per week.
Note: Respondents aged less than 15 or more than 75 years old or who did not work in the year preceding the interview have been excluded from the population.

Value of LBFDDHPW	Condition(s)	Description
996 (NA)	LBFD_01 = NA or LBFD_42 = NA	Population exclusion
999 (NS)	(LBFD_42 = DK, R, NS) or (LBFD_53 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
LBFD_42	LBFD_42 < NA and LBFD_53 = NA	Number of hours usually worked for respondents with one job
LBFD_42 + LBFD_53	LBFD_42 < NA and LBFD_53 < NA	Number of total hours usually worked for respondents with more than one job

6) Full-time/part-time working status (for total usual hours)

Variable name: LBFDDPFT
Based on: LBFDDHPW
Previous usage:
CCHS 2.1 name: LBFCDPFT
CCHS 1.2 name: LBFBDPFT
CCHS 1.1 name: LBFADPFT
NPHS Cycle 5 name: LSC2DPFT
NPHS Cycle 4 name: LSC0DPFT
Description: This variable indicates if the respondent works full-time or part-time.
Note: Respondents aged less than 15 or more than 75 years old or who did not work in the year preceding the interview have been excluded from the population.

Value of LBFDDPFT	Condition(s)	Description
6 (NA)	LBFDDHPW = NA	Population exclusion
9 (NS)	LBFDDHPW = NS	At least one required question was not answered (don't know, refusal, not stated)
1	LBFDDHPW >= 30	Full-time
2	LBFDDHPW < 30	Part-time

7) Job status over past year

Variable name: LBFDDJST
Based on: LBFD_11, LBFD_22, LBFD_61, LBFD_71
Previous usage:
CCHS 2.1 name: LBFCDJST
CCHS 1.2 name: LBFBDJST
CCHS 1.1 name: LBFADJST
NPHS Cycle 5 name: LSC2DJST
NPHS Cycle 4 name: LSC0DJST
Description: This variable indicates the respondent's job status over the past year.
Note: Respondents aged less than 15 or more than 75 years old have been excluded from the population.

Value of LBFDDJST	Condition(s)	Description
96 (NA)	LBFD_01 = NA	Population exclusion
1	LBFD_61 = 52	Has had a job throughout the past year
2	LBFD_71 = 52	Was without a job and looking for work throughout the past year
3	LBFD_22 = 2	Was without a job and not looking for work throughout past year
4	(LBFD_61 + LBFD_71) = 52 and (0 < LBFD_71 < 52) and LBFD_61 < 52	Has had a job part of the year – was without a job and looking for other part of the year
5	LBFD_61 < 52 and LBFD_71 = 0	Has had a job part of the year – was without a job and not looking for other part of the year
6	LBFD_71 < 52 and LBFD_21 = 2 and (LBFD_11 = 1 or LBFD_22 = 1)	Was without a job and looking for part of the year – was without a job and not looking for other part of the year
7	(LBFD_61 + LBFD_71) < 52 and	Has had a job part of the year – was

	(0 < LBFD_71 < 52) and LBFD_61 < 52	without a job and looking for part of the year – was without a job and not looking for other part of year
99 (NS)	(LBFD_22 = DK, R, NS) or (LBFD_61 = DK, R, NS) or (LBFD_71 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)

8) Student working status

Variable name: LBFDDSTU
Modules used: Socio-demographic characteristics (SDC), Labour force (LBF)
Based on: SDCD_8, SDCD_9, LBFD_01, LBFD_02, LBFD_21
Previous usage:
CCHS 2.1 name: LBFCDSTU
CCHS 1.2 name: LBFBDSTU
CCHS 1.1 name: LBFADSTU
NPHS Cycle 5 name: LSC2DSWS
NPHS Cycle 4 name: LSC0DSWS
Description: This variable indicates the respondent's working status if he/she was a student.
Note: Respondents aged less than 15 years or more than 75 years old or who were not studying at the time of the interview have been excluded from the population.

Value of LBFDDSTU	Condition(s)	Description
6 (NA)	LBFD_01 = NA or SDCD_8 = 2	Population exclusion
9 (NS)	(LBFD_21 = DK, R, NS) or (SDCD_9 = DK, R, NS)	At least one required question was not answered (don't know, refusal, not stated)
1	(LBFD_01 = 1 or LBFD_02 = 1 or LBFD_21 = 1) and SDCD_9 = 1	Worked during last 12 months and currently attending school full-time
2	(LBFD_01 = 1 or LBFD_02 = 1 or LBFD_21 = 1) and SDCD_9 = 2	Worked during last 12 months and currently attending school part-time
3	LBFD_21 = 2 and SDCD_9 = 1	Did not work during last 12 months and currently attending school full-time
4	LBFD_21 = 2 and SDCD_9 = 2	Did not work during last 12 months and currently attending school part-time

Income (8 DVs)

1) Total household income – 2 categories

Variable name: INCDDIA2
Based on: DHHDDHSZ, INCD_3A, INCD_3B, INCD_3C, INCD_3D, INCD_3E, INCD_3F
Previous usage:
CCHS 2.1 name: INCCDIA2
CCHS 1.2 name: INCBDIA2
CCHS 1.1 name: INCADIA2
NPHS Cycle 5 name: INC2DIA2
NPHS Cycle 4 name: INC0DIA2
NPHS Cycle 3 name: INC8DIA2
NPHS Cycle 2 name: INC6DIA2
NPHS Cycle 1 name: INC4DIA2 *(formerly DVINC294)*
Description: This variable classifies the total household income into two categories based on total household income and the number of people living in the household.

Value of INCDDIA2	Condition(s)	Description
9 (NS)	(INCD_3A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	[(DHHDDHSZ = 1, 2) and (INCD_3A = 3 or INCD_3B = 1 or INCD_3D = 1)] or [(DHHDDHSZ = 3, 4) and (INCD_3A = 1, 3)] or [DHHDDHSZ >= 5 and ({INCD_3A = 1, 3} or INCD_3F = 1)]	Low income < $15,000 if 1 or 2 people; < $20,000 if 3 or 4 people; < $30,000 if 5+ people
2	[(DHHDDHSZ = 1, 2) and (INCD_3A = 2 or INCD_3D = 2)] or [(DHHDDHSZ = 3, 4) and INCD_3A = 2] or [DHHDDHSZ >= 5 and (INCD_3E = 2 or INCD_3F = 2)]	Middle or high income >= $15,000 if 1 or 2 people; >= $20,000 if 3 or 4 people; >= $30,000 if 5+ people
9 (NS)	Else	Not enough information for the classification

2) Total household income – 4 categories

Variable name: INCDDIA4
Based on: DHHDDHSZ, INCD_3A, INCD_3B, INCD_3C, INCD_3D, INCD_3E, INCD_3F, INCD_3G
Previous usage:
CCHS 2.1 name: INCCDIA4
CCHS 1.2 name: INCBDIA4

CCHS 1.1 name: INCADIA4
NPHS Cycle 5 name: INC2DIA4
NPHS Cycle 4 name: INC0DIA4
NPHS Cycle 3 name: INC8DIA4
NPHS Cycle 2 name: INC6DIA4
NPHS Cycle 1 name: INC4DIA4 *(formerly DVINC494).*
Description: This variable classifies the total household income into four categories based on total household income and the number of people living in the household.

Value of INCDDIA4	Condition(s)	Description
9 (NS)	(INCD_3A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	[(DHHDDHSZ= 1, 2) and (INCD_3A = 3 or INCD_3B = 1 or INCD_3D = 1)] or [(DHHDDHSZ= 3, 4) and (INCD_3A = 1, 3)] or [DHHDDHSZ >= 5 and ({INCD_3A = 1, 3} or INCD_3F = 1)]	Lowest income grouping < $15,000 if 1 or 2 people; < $20,000 if 3 or 4 people; < $30,000 if 5+ people
2	[(DHHDDHSZ = 1, 2) and (INCD_3D = 2 or INCD_3F = 1)] or [(DHHDDHSZ = 3, 4) and INCD_3E = 1] or [DHHDDHSZ >= 5 and (INCD_3F = 2 or {INCD_3G = 1, 2})]	Lower middle income grouping $15,000 to $29,999 if 1 or 2; $20,000 to $39,999 if 3 or 4; $30,000 to $59,999 if 5+
3	[(DHHDDHSZ = 1, 2) and (INCD_3F = 2 or {INCD_3G = 1, 2})] or [(DHHDDHSZ = 3, 4) and (INCD_3G = 1, 2, 3)] or [DHHDDHSZ >= 5 and INCD_3G = 3]	Upper middle income grouping $30,000 to $59,999 if 1 or 2; $40,000 to $79,999 if 3 or 4; $60,000 to $79,999 if 5+
4	[(DHHDDHSZ = 1, 2) and (INCD_3G = 3, 4)] or [DHHDDHSZ >= 3 and INCD_3G = 4]	Highest income grouping >= $60,000 if 1 or 2; >= $80,000 if 3+
9 (NS)	Else	Not enough information for the classification

3) Total household income – 5 categories

Variable name: INCDDIA5
Based on: DHHDDHSZ, INCD_3A, INCD_3B, INCD_3C, INCD_3D, INCD_3E, INCD_3F, INCD_3G
Previous usage:
CCHS 2.1 name: INCCDIA5
CCHS 1.2 name: INCBDIA5
CCHS 1.1 name: INCADIA5
NPHS Cycle 5 name: INC2DIA5
NPHS Cycle 4 name: INC0DIA5
NPHS Cycle 3 name: INC8DIA5
NPHS Cycle 2 name: INC6DIA5
NPHS Cycle 1 name: INC4DIA5 *(formerly DVINC594)*
Description: This variable classifies the total household income into five categories based on total household income and the number of people living in the household.

Value of INCDDIA5	Condition(s)	Description
9 (NS)	(INCD_3A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	[DHHDDHSZ < 5 and (INCD_3A = 3 or INCD_3B = 1)] or [DHHDDHSZ >= 5 and (INCD_3A = 3 or INCD_3B = 1 or INCD_3D = 1)]	Lowest income grouping < $10,000 if 1 to 4 people; < $15,000 if 5+ people
2	[(DHHDDHSZ = 1, 2) and INCD_3D = 1] or [(DHHDDHSZ = 3, 4) and INCD_3B = 2] or [DHHDDHSZ >= 5 and (INCD_3D = 2 or INCD_3F = 1)]	Lower middle income grouping $10,000 to $14,999 if 1 or 2; $10,000 to $19,999 if 3 or 4; $15,000 to $29,999 if 5+
3	[(DHHDDHSZ = 1, 2) and (INCD_3D = 2 or INCD_3F = 1)] or [(DHHDDHSZ = 3, 4) and INCD_3E = 1] or [DHHDDHSZ >= 5 and (INCD_3F = 2 or {INCD_3G = 1, 2})]	Middle income grouping $15,000 to $29,999 if 1 or 2; $20,000 to $39,999 if 3 or 4; $30,000 to $59,999 if 5+
4	[(DHHDDHSZ = 1, 2) and (INCD_3F = 2 or {INCD_3G = 1, 2})] or [(DHHDDHSZ = 3, 4) and (INCD_3G = 1, 2, 3)] or [DHHDDHSZ >= 5 and INCD_3G = 3]	Upper middle income grouping $30,000 to $59,999 if 1 or 2; $40,000 to $79,999 if 3 or 4; $60,000 to $79,999 if 5+

5	[(DHHDDHSZ = 1, 2) and (INCD_3G = 3, 4)] or [DHHDDHSZ >= 3 and INCD_3G = 4]	Highest income grouping >= $60,000 if 1 or 2; >= $80,000 if 3+
9 (NS)	Else	Not enough information for the classification

4) Total household income – all sources

Variable name: INCDDHH
Based on: INCD_3A, INCD_3B, INCD_3C, INCD_3D, INCD_3E, INCD_3F, INCD_3G
Previous usage:
CCHS 2.1 name: INCCDHH
CCHS 1.2 name: INCBDHH
CCHS 1.1 name: INCADHH
NPHS Cycle 5 name: INC2DHH
NPHS Cycle 4 name: INC0DHH
NPHS Cycle 3 name: INC8DHH
NPHS Cycle 2 name: INC6DHH
NPHS Cycle 1 name: INC4DHH *(formerly DVHHIN94).*
Description: This variable groups the total household income from all sources.

Value of INCDDHH	Condition(s)	Description
99 (NS)	(INCD_3A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	INCD_3A = 3	No income
2	INCD_3C = 1	Less than $5,000
3	INCD_3C = 2	$5,000 to $9,999
4	INCD_3D = 1	$10,000 to $14,999
5	INCD_3D = 2	$15,000 to $19,999
6	INCD_3F = 1	$20,000 to $29,999
7	INCD_3F = 2	$30,000 to $39,999
8	INCD_3G = 1	$40,000 to $49,999
9	INCD_3G = 2	$50,000 to $59,999
10	INCD_3G = 3	$60,000 to $79,999
11	INCD_3G = 4	$80,000 +
99 (NS)	Else	Not enough information for the classification

5) Personal income – all sources

Variable name: INCDDPER
Based on: INCD_4A, INCD_4B, INCD_4C, INCD_4D, INCD_4E, INCD_4F, INCD_4G
Previous usage:
CCHS 2.1 name: INCCDPER
CCHS 1.2 name: INCBDPER
CCHS 1.1 name: INCADPER
NPHS Cycle 5 name: INC2DPER
NPHS Cycle 4 name: INC0DPER
NPHS Cycle 3 name: INC8DPER

Description: This variable indicates the respondent's personal income from all sources.
Note: Respondents less than 15 years old were excluded from the population.

Value of INCDDPER	Condition(s)	Description
96 (NA)	DHHD_AGE < 15	Population exclusion
99 (NS)	(INCD_4A = DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	(INCD_4A = 3, NA)	No income
2	INCD_4C = 1	Less than $5,000
3	INCD_4C = 2	$5,000 to $9,999
4	INCD_4D = 1	$10,000 to $14,999
5	INCD_4D = 2	$15,000 to $19,999
6	INCD_4F = 1	$20,000 to $29,999
7	INCD_4F = 2	$30,000 to $39,999
8	INCD_4G = 1	$40,000 to $49,999
9	INCD_4G = 2	$50,000 to $59,999
10	INCD_4G = 3	$60,000 to $79,999
11	INCD_4G = 4	$80,000 +
99 (NS)	Else	Not enough information for the classification

6) Adjusted household income ratio – National level

Variable name: INCDDADR
Based on: INCDDRAT
Description: Adjusted ratios of household income to the low income cut-off are obtained by dividing the original ratios by the highest ratio for all survey respondents. The results are in ratios ranging from 0 to 1.

Value of INCDDADR (9 decimals)	Condition(s)	Description
9.999999999	INCDDRAT = 99.999999999	The ratio cannot be calculated because the household income was not stated.
0 – 1 (rounded to 9 decimal places)	(INCDDRAT / Max for all respondents)	Ratio between 0 and 1 corresponding to the original ratios **divided** by the highest ratio among the ratios of all respondents.

7) Distribution of household income – National level

Variable name: INCDDRCA
Based on: INCDDADR
Description: This derived variable is a distribution of Canadians in deciles (ten categories including approximately the same percentage of residents for each province) based on their value for INCDDADR, the adjusted ratio of their total household income to the low income cut-off corresponding to their household and community size. It provides, for each respondent, a relative measure of their household income to the household incomes of all other respondents.

Deciles are generated using weighted data. Adjusted ratios are presented in increasing order, from smallest to largest, for all 10 provinces irrespective of the household and community size groups in which the individual ratios fall. Derived variables are calculated only for valid responses (not stated, refused, etc. are excluded). Boundaries are determined in order to derive deciles from the total weighted number of cases for which derived variables are calculated.

Value of INCDDRCA	Condition(s)	Description
99	INCDDADR = 9.999999999	Not stated
1	First 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 1
2	Second 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 2
3	Third 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 3
4	Fourth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 4
5	Fifth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 5
6	Sixth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 6
7	Seventh 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 7
8	Eighth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 8
9	Ninth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 9
10	Tenth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 10

8) Distribution of household income – Provincial level

Variable name: INCDDRPR
Based on: INCDDADR, GEOD_PRV
Description: This derived variable is a distribution of residents of each province in deciles (ten categories including approximately the same percentage of residents for each province) based on their value for INCDDADR, the adjusted ratio of their total household income to the low income cut-off corresponding to their household and community size. It provides, for each respondent, a relative measure of their household income to the household incomes of all other respondents in the same province.

Deciles are generated using weighted data. Adjusted ratios are presented in increasing order, from smallest to largest, for each of the 10 provinces irrespective of the household and community size groups in which the individual ratios fall. Derived variables are calculated only for valid responses (not stated, refused, etc. are

excluded). Boundaries are determined in order to derive deciles from the total weighted number of cases for which derived variables are calculated.

The INCDDRPR values are based on a distribution of adjusted ratios for the residents of each of the 10 provinces. This variable should therefore be used in conjunction with the variable for the province of residence (GEOD_PRV).

Value of INCDDRPR	Condition(s)	Description
99	INCDDADR = 9.999999999	Not stated
1	First 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 1
2	Second 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 2
3	Third 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 3
4	Fourth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 4
5	Fifth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 5
6	Sixth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 6
7	Seventh 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 7
8	Eighth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 8
9	Ninth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 9
10	Tenth 10% of respondents from the ascending list of adjusted ratios (INCDDADR)	Decile 10

Count of Number of Food Items (1 DV)

1) Count of the number of food items reported during 24-hour dietary recall

Variable name: R24DDCNT
Based on: FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable presents the total count of the number of food items (i.e. "basic food levels" plus "main recipe levels") reported during the first or second 24-hour dietary recall (see notes 2 & 3).
Note (1): Intakes from vitamin and mineral supplements are not included in this variable.
Note (2): A "basic food level" can be classified in two ways. First, when the food cannot be broken down into other food items (e.g. an apple, 2% milk). Second, when the food item is a recipe, but no nutritional information (i.e. nutritional content and sizing) is currently available for the ingredients which make up the recipe (e.g. some granola bars). For more information about "basic food level", please see the User Guide for CCHS Cycle 2.2.
Note (3): A "main recipe level" refers to recipes that can be broken down into ingredients AND the nutritional information (i.e. nutritional content and portion sizing) is currently available for all the ingredients that make up the recipe. Examples of foods identified at the main recipe level include a hamburger, a pizza, or homemade bread. For more information about main recipe level, please see the 2006 User Guide for CCHS Cycle 2.2.
Note (4): The second 24-hour dietary recall was administered to only 30% of the respondents.
Note (5): Ingredients of recipes are not included in this variable.

Value of R24DDCNT	Condition(s)	Description
99 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
0	R24DFLOW= 1	No food items reported
Total count	FIDD_FID = 00 or FIDD_FID = 01	"basic food levels" plus "main recipe levels" reported

Amount of Food (1 DV)

1) Amount of food in grams

Variable name: FSDDDWTG
Based on: FIDD_WTG, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable presents a total amount of all foods reported (including solids and liquids) in a single day in grams (g) (see note 2).
Note (1): During the 24-hour dietary recall interview it was not possible to quantify the volume of human milk for infants and children who were breast-fed. Therefore, in such cases since the volume was unknown, it was not possible to report a gram amount for human milk, so the value was set to "don't know".
Note (2): When the 24-hour dietary recall information was collected, respondents were able to select the food portion size from a general pre-set list (e.g. one tablespoon) using a portion model (e.g. one piece 2 cm by 2 cm by 2 cm) or by a pre-set list based upon the food item selected (e.g. one medium banana). In the Nutrition Survey System (NSS)[1], the portion size was converted to a gram amount taking into account the density of the food. Note that the amount value is adjusted for any moisture or fat loss due to preparation.

Value of FSDDDWTG	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDD_WTG = DK	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDD_WTG	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDD_WTG <= 99999.999994	Total amount of all foods reported in a single day in grams

1. Nutrition Survey System (NSS) is a software application developed by the Food Directorate of Health Canada which can be used for processing of the 24-hour dietary recall data. For more information about NSS and its role in CCHS Cycle 2.2, please see the User Guide for CCHS Cycle 2.2.

Energy & Macronutrients (13 DVs)

1) Energy intake from food sources in kilocalories

Variable name: FSDDDEKC
Based on: FIDD_EKC, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all energy intakes from food sources in a single day in kilocalories (kcal).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Note (3): The values for food energy are expressed in kilocalories. Because calories are so small, when referring to food and energy expenditure it has become common practice to refer to them in multiples of 1,000. The term for 1,000 calories is kilocalories or kcal. One calorie is the amount of energy (heat) required to raise the temperature of one gram of water at 15°C by one degree Celsius.
Energy functions and food sources: The human body constantly needs to expend energy to perform physical work, to maintain body temperature, and to transport, synthesize, degrade, and replace molecules that make up body tissue. This energy is generated by the oxidation of carbohydrate, fat, protein, and alcohol contained in foods and beverages. The average amount of energy released by one gram of these macronutrients is:

- Protein 4 kcal
- Fat 9 kcal
- Carbohydrate 4 kcal
- Alcohol 7 kcal

References and Internet sites:

- Canadian Food Inspection Agency. *2003 Guide to Food Labeling and Advertising*. Available at: http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Health Canada. Nutrient Value of Some Common Foods. Revised 1999. Available at: http://www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/nutrient_value-valeurs_nutritives_e.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_EKC = 99999.999995, then FIDDTEKC = 0	Set value to 0 to indicate the energy value is not currently available (i.e. indicating that the reported food item contributed to the energy, but the amount contributed is currently unknown)
Else, FIDDTEKC = FIDD_EKC	Energy value is currently available

Value of FSDDDEKC	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTEKC = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTEKC	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTEKC <= 99999.999994	Sum of energy intake per day in kilocalories

2) Total carbohydrate intake from food sources in grams

Variable name: FSDDDCAR
Based on: FIDD_CAR, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all carbohydrate intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: The primary function of carbohydrates is to provide energy to cells in the body, particularly the brain. On average, carbohydrates generate 4 kilocalories per gram of energy to the body. Dietary carbohydrates come in a variety of forms. The most common and abundant ones are sugars, starches, and fibers.

The basic building block of a carbohydrate is a glucose molecule, a simple union of carbon, hydrogen, and oxygen. Starches and fibers are essentially chains of glucose molecules. The human digestive system handles all digestible carbohydrates in much the same way – it breaks them down or tries to break them down into single glucose molecules so that they are small enough to cross into the bloodstream. Most cells use the glucose as a universal energy source.

A healthy choice of dietary carbohydrates depends on how fast and how far the blood sugar rises during the course of digestion. Whole fruits, vegetables (excluding potatoes), brown rice, whole-grain cereals, many legumes including chick peas, beans, and lentils are considered healthier sources of carbohydrate. Because they are digested more slowly, causing a lower and a more gentle change in the blood sugar level. This slow and gentle change in the blood sugar level is known to lower the risk of type 2 diabetes. Potatoes, white rice, white-flour bread, and pasta are considered "less healthy carbohydrates" since they cause a quick and strong increase in the blood sugar level.

References and Internet sites:

- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. Carbohydrates (version: 3/4/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. Perspectives in Nutrition. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_CAR = 99999.999995, then FIDDTCAR = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTCAR = FIDD_CAR	Nutrient value is currently available

Value of FSDDDCAR	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTCAR = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTCAR	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTCAR <= 99999.999994	Sum of "total carbohydrate" intake per day in grams

3) Total dietary fibre intake from food sources in grams

Variable name: FSDDDFI
Based on: FIDD_FI, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all dietary fibre intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Carbohydrate includes dietary fibre. Found only in foods of plant origin, dietary fibre is a group of substances which are resistant to digestion by enzymes produced by humans. Cellulose, lignin, hemicelluloses, pectin, and gums are the five main types of dietary fibre. Fibres are divided into two general categories: water soluble and water insoluble. Fibres could delay the gastric emptying of ingested foods into the small intestine, resulting in a sensation of fullness, which may contribute to weight control. Fibres are also known to have a beneficial effect on the blood sugar level, because they slow the digestion of other foods and therefore causing a lower and a more gentle change in the blood sugar level. Good sources of dietary fibre include legumes, nuts, whole grains, bran products, fruits, and non-starchy vegetables.
References and Internet sites:

- Canadian Food Inspection Agency. *2003 Guide to Food Labeling and Advertising*. Available at: http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. *Fiber* (version: 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Fiber*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FI = 99999.999995, then FIDDTFI = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFI = FIDD_FI	Nutrient value is currently available

Value of FSDDDDFI	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFI = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFI	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFI <= 99999.999994	Sum of “total dietary fibre” intake per day in grams

4) Total sugars intake from food sources in grams

Variable name: FSDDDSUG
Based on: FIDD_SUG, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all sugar intakes from food sources in a single day in grams (g).
Note: During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Nutrient functions and food sources: Sugars often take the form of single or double sugars, called monosaccharides (*mono* meaning "one" and *saccharide* meaning "sugar") and disaccharides, respectively. The common monosaccharides are glucose, fructose and galactose. As carbohydrates, sugars provide energy to cells in the body, particularly the brain. Sugars are found in foods such as fruits, vegetables, flour and cereal products, and milk products. Further, sugars are part of ingredients like honey, molasses, and fruit juice concentrates. There are no nutritional differences among sugars, whether they are naturally occurring or added to foods. The body uses all types of sugars in the same way. Once absorbed in the small intestine and delivered to the liver, much of the fructose and galactose is converted to glucose (also known as blood sugar). The primary role of glucose is to provide energy to cells in the body.
References and Internet sites:

- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. Carbohydrates (version: 3/4/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- IFIC Review - International Food Information Council Foundation. Sweet Facts About Sugars and Health. Available at: http://www.ific.org/publications/reviews/sugarsir.cfm (accessed March 2006).
- Wardlaw, Gordon M. et al. Perspectives in Nutrition. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_SUG = 99999.999995, then FIDDTSUG = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTSUG = FIDD_SUG	Nutrient value is currently available

Value of FSDDDSUG	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTSUG = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTSUG	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTSUG <= 99999.999994	Sum of "total sugars" intake per day in grams

5) Total fat intake from food sources in grams

Variable name: FSDDDFAT
Based on: FIDD_FAT, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all fat intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Fat is a major source of energy for the human body. On average, fat generates 9 kilocalories per gram of energy to the body. Fat tissue insulates the body, and surrounds and protects some organs (e.g. kidneys) against traumatic injury. Fat also helps the body to absorb vitamins A, D, E and K, and carotenoids. Dietary fat is composed mostly of triglycerides[2] which carry three fatty acids and are found in both animal and plant sources.

The four main types of fatty acids are: Saturated fatty acids (found in highest proportions in animal fats, whole milk products, coconut, and palm kernel oil), monounsaturated fatty acids (e.g. avocadoes, canola, peanut and olive oils), polyunsaturated fatty acids (e.g. fish, soybean, safflower and flaxseed oils) and trans fatty acids (e.g. hydrogenated margarines and vegetable shortening, as well as many processed foods containing these ingredients). Saturated and trans fatty acids are considered 'not-so-good' fats because they could raise blood cholesterol levels and increase risk of heart disease, while 'good' fats, meaning monounsaturated and polyunsaturated fatty acids lower the risk. Linoleic and linolenic are known as polyunsaturated fatty acids. Both are essential in the diet as they cannot be synthesized by humans and are now linked to positive impacts countering cardiovascular disease, arthritis, cancer, and other chronic diseases.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- The British Dietetic Association. *Cholesterol Facts.* Available at: www.bda.uk.com/latest-food-facts.php (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Hamilton, Eva May Nunnelley et al. *Nutrition: Concepts and Controversies*. St. Paul: West Publishing Company, 1991 (5th Edition).
- Harvard School of Public Health. *Fats and Cholesterol: Nutrition Source* (version: 2/17/2006). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *It's Your Health – Trans Fat.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/food-aliment/trans_e.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

2. Very few fatty acids are found free in the body or in foods. Usually they have been incorporated into large and complex compounds called "triglycerides". Each triglyceride is composed of three fatty acids (i.e. saturated, monounsaturated, and polyunsaturated fatty acids) bonded to a molecule of glycerol. Triglycerides are a key energy source for the body and the major form of fat in the body and in foods.

Temporary reformats

Condition(s)	Description
If FIDD_FAT = 99999.999995, then FIDDTFAT = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAT = FIDD_FAT	Nutrient value is currently available

Value of FSDDDFAT	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAT = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAT	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAT <= 99999.999994	Sum of "total fat" intake per day in grams

6) Total saturated fatty acid intake from food sources in grams

Variable name: FSDDDFAS
Based on: FIDD_FAS, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all saturated fatty acid intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Saturated fatty acids are a potential energy source for the body and considered structural components of cell membranes. Saturated fatty acids can be synthesized from other fuel sources (e.g. carbohydrates, proteins) when these are consumed in excess of energy needs and therefore are not essential in the diet. Saturated fatty acids are considered "not-so-good-fats" because they could raise blood cholesterol levels and increase risk of heart disease. These acids are mainly found in animal sources such as meat, whole-milk dairy products including butter, poultry skin, and egg yolks. Some plant sources are also high in saturated fats including coconut milk and palm oil. Saturated fats are generally solid at room temperature.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- The British Dietetic Association. *Cholesterol Facts.* Available at: www.bda.uk.com/latest-food-facts.php (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. *Fats and Cholesterol: Nutrition Source* (version: 2/17/2006). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_FAS = 99999.999995, then FIDDTFAS = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAS = FIDD_FAS	Nutrient value is currently available

Value of FSDDDFAS	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAS = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAS	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAS <= 99999.999994	Sum of "total saturated fatty acid" intake per day in grams

7) Total monounsaturated fatty acid intake from food sources in grams

Variable name: FSDDDFAM
Based on: FIDD_FAM, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all monounsaturated fatty acid intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Unsaturated fatty acids can be divided into two categories: Monounsaturated and polyunsaturated fatty acids. Monounsaturated fatty acids are a potential energy source for the body and as a structural fatty acid for cell membranes. Monounsaturated fatty acids can be synthesized from other fuel sources (e.g. carbohydrates, proteins) and therefore are not essential in the diet. Rich dietary sources of monounsaturated fatty acids include canola and olive oils.
References and Internet sites:

- The British Dietetic Association. *Cholesterol Facts.* Available at: www.bda.uk.com/latest-food-facts.php (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FAM = 99999.999995, then FIDDTFAM = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAM = FIDD_FAM	Nutrient value is currently available

Value of FSDDDFAM	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAM = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAM	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAM <= 99999.999994	Sum of "total monounsaturated fatty acid" intake per day in grams

8) Total polyunsaturated fatty acid intake from food sources in grams

Variable name: FSDDDFAP
Based on: FIDD_FAP, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all polyunsaturated fatty acid intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Polyunsaturated fatty acids are essential for cell structure and making hormones. They also supply the body with energy. Two essential polyunsaturated fatty acids are linoleic and linolenic acids. Rich dietary sources of polyunsaturated fatty acids are fish and vegetable oils including soybean, corn, sunflower, and safflower oils.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.

Temporary reformats

Condition(s)	Description
If FIDD_FAP = 99999.999995, then FIDDTFAP = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAP = FIDD_FAP	Nutrient value is currently available

Value of FSDDDFAP	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAP = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAP	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAP <= 99999.999994	Sum of “total polyunsaturated fatty acid” intake per day in grams

9) Linoleic fatty acid intake from food sources in grams

Variable name: FSDDDFAL
Based on: FIDD_FAL, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all linoleic fatty acid intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Linoleic is an essential omega-6 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in immune system function and vision, and helps form cell membranes and hormones. The human body cannot synthesize linoleic acid; this acid can only be obtained from

dietary sources. Food sources of linoleic fatty acid include nuts, seeds, certain vegetables, and vegetable oils such as soybean, safflower, and corn oils.

References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: **http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm** (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FAL = 99999.999995, then FIDDTFAL = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAL = FIDD_FAL	Nutrient value is currently available

Value of FSDDDFAL	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAL = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAL	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAL <= 99999.999994	Sum of linoleic fatty acid intake per day in grams

10) Linolenic fatty acid intake from food sources in grams

Variable name: FSDDDFAN
Based on: FIDD_FAN, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a rolled-up of all linolenic fatty acid intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Linolenic is an essential omega-3 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in blood clotting, immune system function and vision, and helps form cell membranes and hormones (eicosonoids). The human body cannot synthesize linolenic acid; this acid can only be obtained from dietary sources. Rich sources of linolenic fatty acids include fish oils, fatty fish, and vegetable oils such as canola, soybean and flaxseed oils.

References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FAN = 99999.999995, then FIDDTFAN = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFAN = FIDD_FAN	Nutrient value is currently available

Value of FSDDDFAN	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTFAN = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFAN	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFAN <= 99999.999994	Sum of linolenic fatty acid intake per day in grams

11) Cholesterol intake from food sources in milligrams

Variable name: FSDDDCHO
Based on: FIDD_CHO, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all cholesterol intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Cholesterol is a waxy substance that is essential within the body for the formation of cell membranes, some hormones, and vitamin D. It is also critical for the development of neural tissue during infancy. However, high levels of circulating blood cholesterol have been linked to an increased risk of cardiovascular disease. The average person produces the large majority of blood cholesterol in his or her liver, while a much less significant portion is absorbed from foods.

Dietary cholesterol is found in foods of animal origin including liver, kidney, egg yolks, and whole milk products. Some seafood including shrimp and lobster contain moderately high amount of dietary cholesterol. Prior to the 1980s, reducing the amount of dietary cholesterol was recommended since it was associated with higher blood cholesterol. But since the 1980s, research has shown that the amount of saturated fats and trans fats have a major influence on blood cholesterol level through stimulating the enzyme responsible for cholesterol production; and foods containing cholesterol such as eggs and shellfish have less influence on blood cholesterol because they are relatively low in saturated fats.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- The British Dietetic Association. *Cholesterol Facts.* Available at: www.bda.uk.com (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. *Fats and Cholesterol: Nutrition Source* (Version: 2/17/2006). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_CHO = 99999.999995, then FIDDTCHO = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTCHO = FIDD_CHO	Nutrient value is currently available

Value of FSDDDCHO	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTCHO = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTCHO	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTCHO <= 99999.999994	Sum of cholesterol intake per day in milligrams

12) Protein intake from food sources in grams

Variable name: FSDDDPRO
Based on: FIDD_PRO, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all protein intakes from food sources in a single day in grams (g).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Protein functions as the main structural material in the body. For example, it constitutes a major part of bone and muscle. In addition, protein constitutes important components of blood, cell membranes, enzymes, and immune factors where it influences body functions, such as blood clotting, fluid balance, hormone and enzyme production, visual processes and cell repair. Protein can also provide energy for the body (typically, the body uses little protein for the purpose of meeting the daily energy needs).

Proteins are formed by the bonding together of 20 amino acids.[3] Of these, nine are known as "essential amino acids" because the body cannot make them and therefore must be obtained from foods. The remaining ones are called "nonessential amino acids" because they can be synthesized by a healthy body in sufficient amounts. Since the body does not store amino acids, as it does for fats or carbohydrates, it needs a daily supply of amino acids in order to build new proteins. Foods from animal sources are considered "complete protein" since they contain ample amounts of all nine essential amino acids. Plant sources (e.g. legumes, grains, seeds and nuts) are called "incomplete proteins" because many are low in one or more of the nine essential amino acids - although appropriate combinations of incomplete proteins can yield all of the essential amino acids if necessary. Overall, good sources of protein are meat, poultry, fish, dairy products, beans, nuts, and whole grains.

References and Internet sites:

- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Hamilton, Eva May Nunnelley et al. *Nutrition: Concepts and Controversies*. St. Paul: West Publishing Company, 1991 (5th Edition).
- Harvard School of Public Health. *Protein* (version of 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

3. Proteins are unique among the energy-yielding nutrients such as fat and carbohydrate. One key difference from fat and carbohydrate, which contain only carbon, hydrogen, and oxygen atoms, is that protein contains nitrogen atoms. These nitrogen atoms give the name *amino* (nitrogen-containing) to the amino acids. Each type of protein has a distinctive sequence of amino acids.

Temporary reformats

Condition(s)	Description
If FIDD_PRO = 99999.999995, then FIDDTPRO = 0	Set value to 0 to indicate the nutrient value is not currently available (i.e. indicating that the reported food item contributed to the nutrient, but the amount contributed is currently unknown)
Else, FIDDTPRO = FIDD_PRO	Nutrient value is currently available

Value of FSDDDPRO	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTPRO = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTPRO	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTPRO <= 99999.999994	Sum of protein intake per day in grams

13) Alcohol intake from food sources in grams

Variable name: FSDDDALC
Based on: FIDD_ALC, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all alcohol intakes from food sources in a single day in grams (g).
Note: During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Information about alcohol: The active ingredient in alcoholic beverages is a simple molecule called ethanol. Alcohol when absorbed and utilized, on average, yields about 7 kcal/g of energy to the body. Although alcohol is not considered an essential nutrient since it has no required function, various studies have highlighted the benefits of moderate alcohol consumption for the heart and circulatory system. On the personal level, heavy drinking can take a toll on the body. For example, it can cause inflammation of the liver and lead to scarring of the liver, a potentially fatal disease. Heavy drinking can also increase blood pressure and damage heart muscle.
References and Internet sites:

- Harvard School of Public Health. *Alcohol* (version: 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_ALC = 99999.999995, then FIDDTALC = 0	Set value to 0 to indicate this nutrient value not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTALC = FIDD_ALC	Nutrient value currently available

Value of FSDDDALC	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTALC = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTALC	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTALC <= 99999.999994	Sum of alcohol intake per day in grams

Percentage of Total Energy Intake from Macronutrients (9 DVs)

1) Percentage of total energy intake from all carbohydrate food sources

Variable name: FSDDDECA
Based on: FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all carbohydrates consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Carbohydrates are energy rich and the preferred energy source by all human tissues providing approximately 4 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDCAR, FSDDDFAT, FSDDDPRO and FSDDDALC for more information about energy and carbohydrates.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDECA	Condition(s)	Description
99999.999999 (NS)	FSDDDCAR = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDCAR = 0 or FSDDTEKC = 0	No food items reported
(4 x FSDDDCAR/FSDDTEKC) x 100	(0 < FSDDDCAR <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all carbohydrate sources in a single day

2) Percentage of total energy intake from all fat food sources

Variable name: FSDDDELI
Based on: FSDDDFAT, FSDDDCAR, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all fats consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Fats are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAT, FSDDDCAR, FSDDDPRO, and FSDDDALC for more information about energy and fats.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDELI	Condition(s)	Description
99999.999999 (NS)	FSDDDFAT = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAT = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAT/ FSDDTEKC) x 100	(0 < FSDDDFAT <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all fat sources in a single day

3) Percentage of total energy intake from all saturated fatty acid food sources

Variable name: FSDDDESA
Based on: FSDDDFAS, FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all saturated fatty acids consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Saturated fatty acids are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAS, FSDDDCAR, FSDDDFAT, FSDDDPRO, and FSDDDALC for more information about energy and saturated fatty acids.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDESA	Condition(s)	Description
99999.999999 (NS)	FSDDDFAS = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAS = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAS/FSDDTEKC) x 100	(0 < FSDDDFAS <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all saturated fatty acid sources in a single day

4) Percentage of total energy intake from all monounsaturated fatty acid food sources

Variable name: FSDDDEMO
Based on: FSDDDFAM, FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all monounsaturated fatty acids consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Monounsaturated fatty acids are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAM, FSDDDCAR, FSDDDFAT, FSDDDPRO, and FSDDDALC for more information about energy and monounsaturated fatty acids.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDEMO	Condition(s)	Description
99999.999999 (NS)	FSDDDFAM = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAM = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAM/ FSDDTEKC) x 100	(0 < FSDDDFAM <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all monounsaturated fatty acid sources in a single day

5) Percentage of total energy intake from all polyunsaturated fatty acid food sources

Variable name: FSDDDEPO
Based on: FSDDDFAP, FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all polyunsaturated fatty acids consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Polyunsaturated fatty acids are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAP, FSDDDCAR, FSDDDFAT, FSDDDPRO, and FSDDDALC for more information about energy and polyunsaturated fatty acids.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDEPO	Condition(s)	Description
99999.999999 (NS)	FSDDDFAP = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAP = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAP/FSDDTEKC) x 100	(0 < FSDDDFAP <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all polyunsaturated fatty acid sources in a single day

6) Percentage of total energy intake from all linoleic fatty acid food sources

Variable name: FSDDDEEI
Based on: FSDDDFAL, FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all linoleic fatty acids consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Linoleic fatty acids are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAL, FSDDDCAR, FSDDDFAT, FSDDDPRO, and FSDDDALC for more information about energy and linoleic fatty acids.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDEEI	Condition(s)	Description
99999.999999 (NS)	FSDDDFAL = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAL = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAL/FSDDTEKC) x 100	(0 < FSDDDFAL <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all linoleic fatty acid sources in a single day

7) Percentage of total energy intake from all linolenic fatty acid food sources

Variable name: FSDDDENI
Based on: FSDDDFAN, FSDDDCAR, FSDDDFAT, FSDDDPRO, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all linolenic fatty acids consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Linolenic fatty acids are energy rich and provide approximately 9 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDFAN, FSDDDCAR, FSDDDFAT, FSDDDPRO, and FSDDDALC for more information about energy and linolenic fatty acids.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDENI	Condition(s)	Description
99999.999999 (NS)	FSDDDFAN = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDFAN = 0 or FSDDTEKC = 0	No food items reported
(9 x FSDDDFAN/FSDDTEKC) x 100	(0 < FSDDDFAN <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all linolenic fatty acid sources in a single day

8) Percentage of total energy intake from all protein food sources

Variable name: FSDDDEPR
Based on: FSDDDPRO, FSDDDCAR, FSDDDFAT, FSDDDALC
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all proteins consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Proteins can provide approximately 4 kilocalories per gram of energy to the body although they are utilized last for this purpose after carbohydrate and fat.
Note (3): See the derived variables of FSDDDPRO, FSDDDCAR, FSDDDFAT, and FSDDDALC for more information about energy and protein.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDEPR	Condition(s)	Description
99999.999999(NS)	FSDDDPRO = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDPRO = 0 or FSDDTEKC = 0	No food items reported
(4 x FSDDDPRO/FSDDTEKC) x 100	(0 < FSDDDPRO <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all protein sources in a single day

9) Percentage of total energy intake from all alcohol food sources

Variable name: FSDDDEAL
Based on: FSDDDALC, FSDDDCAR, FSDDDFAT, FSDDDPRO
Previous usage: This is a new derived variable.
Description: This variable estimates the percentage of total energy intake derived from all alcohol consumed in a single day.
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Alcohol is energy rich and provides approximately 7 kilocalories per gram of energy to the body.
Note (3): See the derived variables of FSDDDALC, FSDDDCAR, FSDDDFAT, and FSDDDPRO for more information about energy and alcohol.

Temporary reformats

Condition(s)	Description
If (FSDDDFAT = NS) or (FSDDDALC = NS) or (FSDDDPRO = NS) or (FSDDDCAR = NS), then FSDDTEKC = NS	Set value to "Not stated" if 24-hour dietary recall was invalid or infants/children were breast-fed
Else, (9 x FSDDDFAT) + (7 x FSDDDALC) + (4 x FSDDDPRO) + (4 x FSDDDCAR) = FSDDTEKC	Total energy intake derived from carbohydrate, total fat, protein, and alcohol consumed in a single day

Value of FSDDDEAL	Condition(s)	Description
99999.999999 (NS)	FSDDDALC = NS or FSDDTEKC = NS	24-hour dietary recall was invalid or infants/children were breast-fed
0	FSDDDALC = 0 or FSDDTEKC = 0	No food items reported
(7 x FSDDDALC/FSDDTEKC) x 100	(0 < FSDDDALC <= 99999.999994) and (0 < FSDDTEKC <= 99999.999994)	Percentage of total energy intake derived from all alcohol sources in a single day

Vitamin Nutrients (12 DVs)

1) Vitamin A intake from food sources in micrograms of retinol activity equivalents

Variable name: FSDDDRAE
Based on: FIDD_RAE, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all vitamin A intakes from food sources in a single day in micrograms of retinol activity equivalents (RAE) (see note 3).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Note (3): Vitamin A (retinol) is a generic term for a large number of related compounds. Retinol, retinal, and retinoic acid are often referred to as "preformed vitamin A" (or preformed retinoids). The preformed vitamin A is found almost exclusively in animal-derived foods (e.g. animal liver and fish liver oils). The efficiency of absorption of preformed vitamin A in the human body is generally high.

In addition to preformed vitamin A, Beta-carotene and other carotenoids that can be converted by the body into retinol are referred to as "provitamin A carotenoids" (or vitamin A precursors). This form of provitamin A exists exclusively in plants (including vegetable oils, fruits and vegetables). Although several hundred carotenoids exist in plant origins, only about 10%, most notable Beta-carotene, yield significant vitamin A activity. Overall, the amount of vitamin A activity of "provitamin A carotenoids" is considerably lower than that of preformed vitamin A, but the amount of carotenoids available from food is much higher than retinol so their contribution is critical.

The most recent North American standard of measure of vitamin A - as recommended by the Institute of Medicine (2001) - is retinol activity equivalents (RAE) which represents the sum of vitamin A activity as retinol and carotenoid content after conversion. The Institute of Medicine recommended the following equivalencies to account for lower vitamin A activity of carotenoids:

1 RAE = 1 mcg retinol
1 RAE = 12 mcg of Beta-carotene
1 RAE = 24 mcg of other carotenoids

Therefore, when calculating the amount of the total vitamin A activity for mixed foods containing both retinol and carotenoids, the following formula is used:

RAE = 1 mcg retinol + mcg Beta-carotene/12 + mcg other carotenoids/24

Nutrient functions and food sources: Vitamin A is an essential nutrient needed in small amounts in the human body for healthy skin, bones and teeth. Vitamin A plays a vital role in proper vision. Through a distinct mechanism, vitamin A has systemic functions which stimulate the production and activity of white blood cells and regulate cell growth and division. Vitamin A is commonly known as the anti-infective vitamin, because it is required for normal functioning of the immune system. Examples of food sources with high concentration of vitamin A include animal liver, fish liver oils, eggs, dairy products, dark green leafy vegetables (e.g. spinach and kale), yellow-orange vegetables (e.g. carrots, sweet potatoes, and pumpkin), and orange fruits (e.g. mango, cantaloupe, and apricots).

References and Internet sources:

- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc.* Washington, DC: National Academy Press, 2001.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).

- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin A*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_RAE = 99999.999995, then FIDDTRAE = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTRAE = FIDD_RAE	Nutrient value is currently available

Value of FSDDDRAE	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTRAE = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTRAE	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTRAE <= 99999.999994	Sum of vitamin A intake per day in micrograms of retinol activity equivalents

2) Vitamin D intake from food sources in micrograms

Variable name: FSDDDDMG
Based on: FIDD_DMG, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all vitamin D intakes from food sources in a single day in micrograms (mcg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Note (3): Vitamin D was formerly expressed in international units (IU), but is now measured in micrograms (mcg).
Nutrient functions and food sources: Vitamin D is essential for support of skeletal growth and bone strength through the maintenance of calcium and phosphorous homeostasis. Very few foods naturally contain vitamin D. Foods containing vitamin D are fatty fish (e.g. mackerel, salmon, and sardines), animal liver, some fish liver oils, and eggs. In Canada, milk and margarine are fortified with vitamin D to prevent nutritional deficiencies.
References and Internet sites:

- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Food fortification in Canada-Current Practices.* Available at: www.hc-sc.gc.ca/fn-an/nutrition/vitamin/fortification_factsheet1-fiche1_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin D*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_DMG = 99999.999995, then FIDDTDMG = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTDMG = FIDD_DMG	Nutrient value is currently available

Value of FSDDDDMG	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTDMG = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTDMG	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTDMG <= 99999.999994	Sum of vitamin D intake per day in micrograms

3) Vitamin C intake from food sources in milligrams

Variable name: FSDDDC
Based on: FIDD_C, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all vitamin C intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Vitamin C (or ascorbic acid) functions as an antioxidant with the ability to neutralize harmful free radicals, and to help make collagen, a tissue needed for healthy bones, teeth, gums and blood vessels. Vitamin C is also involved in supporting the immune system. The best food sources of vitamin C are fruits and vegetables including green and red peppers, broccoli, spinach, tomatoes, berries, and citrus fruits or juices.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin C.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines.

Temporary reformats

Condition(s)	Description
If FIDD_C = 99999.999995, then FIDDTC = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTC = FIDD_C	Nutrient value is currently available

Value of FSDDDC	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTC = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTC	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTC <= 99999.999994	Sum of vitamin C intake per day in milligrams

4) Thiamin intake from food sources in milligrams

Variable name: FSDDDTHI
Based on: FIDD_THI, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all thiamin intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: The majority of the body's thiamin (vitamin B1) is concentrated in nerve and muscle cells. Thiamin facilitates energy metabolism, i.e. helps the body to process carbohydrates, protein and fat. This nutrient also plays a role in the proper functioning of nerve cells. Good dietary sources of thiamin are whole grain and fortified cereals, lean pork, legumes (e.g. beans and lentils), seeds, and yeast.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Thiamin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_THI = 99999.999995, then FIDDTTHI = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTTHI = FIDD_THI	Nutrient value is currently available

Value of FSDDDTHI	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTTHI = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTTHI	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTTHI <= 99999.999994	Sum of thiamin intake per day in milligrams

5) Riboflavin intake from food sources in milligrams

Variable name: FSDDDRIB
Based on: FIDD_RIB, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all riboflavin intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Riboflavin (vitamin B2) functions as a coenzyme in many metabolic pathways and in energy production. In other cellular roles it can combat oxidative damage. This nutrient helps to maintain healthy eyes and skin and to produce red blood cells. Most plant and animal derived foods contain at least small amounts of riboflavin. Examples of rich sources of riboflavin are organ meats, milk, cheese, yogurt, leafy green vegetables, and whole or fortified grains.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Riboflavin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_RIB = 99999.999995, then FIDDTRIB = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTRIB = FIDD_RIB	Nutrient value is currently available

Value of FSDDDRIB	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTRIB = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTRIB	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTRIB <= 99999.999994	Sum of riboflavin intake per day in milligrams

6) Niacin intake from food sources in milligrams of niacin equivalents

Variable name: FSDDDNIA
Based on: FIDD_NIA, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all niacin intakes from food sources in a single day in milligram of niacin equivalents (NE) (see note 3).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.

Note (3): For this variable, the niacin intakes are expressed in niacin equivalents (NE) which include both trypthophan and preformed niacin (i.e. nicotinic acid and nicotinamide). Tryptophan is an essential amino acid that can serve as the metabolic precursor of niacin. Niacin equivalents are calculated as the sum of the contributions in food from preformed niacin plus the niacin which the body can form from tryptophan.–

Nutrient functions and food sources: Niacin (vitamin B3) includes nicotinic acid and nicotinamide, which are both used by the body to form two coenzymes critical to numerous biological redox reactions including cellular energy production and metabolism. Niacin is also involved in the regulation of the total blood cholesterol level. The body's niacin requirement is met not only by nicotinic acid and nicotinamide present in the diet, but also by the conversion from dietary protein containing the amino acid tryptophan. On average, 1 milligram of niacin can be synthesized from the ingestion of 60 milligrams of tryptophan. Rich dietary sources of niacin are lean meats, fish, poultry, and peanuts. Note that neither nicotinic acid nor nicotinamide are related to the nicotine found in tobacco, although their names are similar.

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline.* Washington, DC: National Academy Press, 1998.
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Niacin.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Temporary reformats

Condition(s)	Description
If FIDD_NIA = 99999.999995, then FIDDTNIA = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTNIA = FIDD_NIA	Nutrient value is currently available

Value of FSDDDNIA	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTNIA = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTNIA	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTNIA <= 99999.999994	Sum of niacin intake per day in milligrams of niacin equivalents

7) Vitamin B6 intake from food sources in milligrams

Variable name: FSDDDB6
Based on: FIDD_B6, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all vitamin B6 intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Vitamin B6 (pyridoxine and related compounds) functions as a coenzyme and plays a vital role in the metabolism of amino acids. Vitamin B6 helps form the heme component of red blood cells and healthy nervous system. In terms of food sources, vitamin B6 is distributed in greatest concentration in meats, whole grain products (especially wheat), non-citrus fruits (especially banana), and white potatoes.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B6.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_B6 = 99999.999995, then FIDDTB6 = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTB6 = FIDD_B6	Nutrient value is currently available

Value of FSDDDB6	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTB6 = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTB6	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTB6 <= 99999.999994	Sum of vitamin B6 intake per day in milligrams

8) Vitamin B12 intake from food sources in micrograms

Variable name: FSDDDB12
Based on: FIDD_B12, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all vitamin B12 intakes from food sources in a single day in micrograms (mcg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Vitamin B12 – along with folate and vitamin B6 – plays a vital role in DNA replication and maintenance. In addition, vitamin B12 is important for normal blood formation and neurological function. Rich food sources of vitamin B12 are animal liver and kidney, meat, fish (including shellfish), eggs, milk, and cheese. Vitamin B12 is not generally present in plant products or yeast.

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B12.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Temporary reformats

Condition(s)	Description
If FIDD_B12 = 99999.999995, then FIDDTB12 = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTB12 = FIDD_B12	Nutrient value is currently available

Value of FSDDDB12	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTB12 = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTB12	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTB12 <= 99999.999994	Sum of vitamin B12 intake per day in micrograms

9) Naturally occurring folate intake from food sources in micrograms

Variable name: FSDDDFON
Based on: FIDD_FON, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all naturally occurring folate intakes from food sources in a single day in micrograms (mcg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. Most naturally occurring folate is called "food folate" which includes various forms of folate found naturally in foods. "Folic acid" refers to the most oxidized and stable form of folate which is added to supplements and fortified foods. The bioavailability (i.e. degree of absorption in the body) of folate ranges from about 100% for folic acid supplements taken on an empty stomach to about 50% for food folate.

Folate functions as a coenzyme for the metabolism of amino acids and their derivatives. Folate is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folate is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine. In 1998, knowing that it is not easy to get enough folate from food, the governments in both the United States and Canada passed a legislation for the mandatory fortification of all white wheat flour, and optional fortification of pasta and cornmeal with folic acid to reduce the risk of NTDs.

Folate exists in various foods of plant and animal origin. Rich dietary sources of "natural folate" are animal liver, dark green leafy vegetables (especially spinach, brussel sprouts, asparagus and broccoli), and legumes (especially beans and peas).

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FON = 99999.999995, then FIDDTFON = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFON = FIDD_FON	Nutrient value is currently available

Value of FSDDDFON	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTFON = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFON	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFON <= 99999.999994	Sum of naturally occurring folate intake per day in micrograms

10) Folic acid intake from food sources in micrograms

Variable name: FSDDDFOA
Based on: FIDD_FOA, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all folic acid intakes from food sources fortified with folic acid in a single day in micrograms (mcg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate", called "food folate", and the added synthetic form of folate, called "folic acid". Folic acid is the most oxidized and stable form of folate which is added to dietary supplements and fortified foods, like cereals and pasta. Folic acid is better absorbed and more readily available to the body than naturally occurring folate.

Folic acid functions as a coenzyme for the metabolism of amino acids and their derivatives. Folic acid is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folic acid is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine. In 1998, knowing that it is not easy to get enough folate from food, the governments in both the United States and Canada passed a legislation for the mandatory fortification of all white wheat flour, and optional fortification of pasta and cornmeal with folic acid to reduce the risk of NTDs. Rich dietary sources of folic acid are enriched white wheat flour, most pasta, some cereals, and citrus fruit juices.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FOA = 99999.999995, then FIDDTFOA = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFOA = FIDD_FOA	Nutrient value is currently available

Value of FSDDDFOA	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTFOA = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFOA	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFOA <= 99999.999994	Sum of folic acid intake per day in micrograms

11) Folate intake from food sources in micrograms of dietary folate equivalents

Variable name: FSDDDDFE
Based on: FIDD_DFE, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all "naturally occurring folate" plus "folic acid" from food sources in a single day in micrograms of dietary folate equivalents (DFE). DFE is a measuring unit that takes into account the differences in the bioavailability of natural folate and folic acid (see note 3).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Note (3): There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate" or called "food folate" and the added synthetic form of folate called "folic acid". Since late 1990's, a new measuring unit called Dietary Folate Equivalents (DFE) has become common for calculating the total activity of food folate and folic acid. DFE takes into account the differences in the bioavailability of the two forms of folate; meaning it adjusts for the nearly 50% lower bioavailability (i.e. less absorption in the body) of food folate compared to that of folic acid. Here is the DFE formula for foods with a mixture of folic acid and food folate: 1 DFE = (mcg of folic acid x 1.7) + mcg of food folate.
Nutrient functions and food sources: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. Most naturally occurring folate is called "food folate" which includes various forms of folate found naturally in foods. "Folic acid" refers to the most oxidized and stable form of folate which is added to supplements and fortified foods. The bioavailability (i.e. degree of absorption in the body) of folate ranges from about 100% for folic acid supplements taken on an empty stomach to about 50% for food folate.

Folate functions as a coenzyme for the metabolism of amino acids and their derivatives. Folate is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folate is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine. In 1998, knowing that it is not easy to get enough folate from food, the governments in both the United States and Canada passed a legislation for the mandatory fortification of all white wheat flour, and optional fortification of pasta and cornmeal with folic acid to reduce the risk of NTDs.

Folate exists in various foods of plant and animal origins. Rich dietary sources of "natural folate" are animal liver, dark green leafy vegetables (especially spinach, brussel sprouts, asparagus, and broccoli), and legumes (especially beans and peas). Enriched white wheat flour, most pasta, some cereals, and citrus fruit juices are rich dietary sources of folic acid.

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_DFE = 99999.999995, then FIDDTDFE = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTDFE = FIDD_DFE	Nutrient value is currently available

Value of FSDDDDFE	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTDFE = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTDFE	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTDFE <= 99999.999994	Sum of "naturally occurring folate" plus "folic acid" intake per day in micrograms of dietary folate equivalents

12) Folacin intake from food sources in micrograms

Variable name: FSDDDFOL
Based on: FIDD_FOL, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all "naturally occurring folate" plus "folic acid" from food sources in a single day in micrograms (mcg). Folacin refers to the sum of the quantities of "naturally occurring folate" and "folic acid" without taking into account their differing bioavailability (see note 3).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.

Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Note (3): There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate" or called "food folate" and the added synthetic form of folate called "folic acid". The term "folacin" is an old measuring unit referring to the simple arithmetic SUM of the food folate in micrograms and the content of folic acid in foods in micrograms. However, since the late 1990s, a new measuring unit called Dietary Folate Equivalents (DFE) has become more common for calculating the total activity of food folate and folic acid. DFE takes into account the differences in the bioavailability of the two forms of folate; meaning it adjusts for the nearly 50% lower bioavailability (i.e. less absorbed in the body) of food folate compared to that of folic acid. Here is the DFE formula for foods with a mixture of folic acid and food folate: 1 DFE = (mcg of folic acid x 1.7) + mcg of food folate.
Nutrient functions and food sources: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. Most naturally occurring folate is called "food folate" which includes various forms of folate found naturally in foods. "Folic acid" refers to the most oxidized and stable form of folate which is added to supplements and fortified foods. The bioavailability (i.e. degree of absorption in the body) of folate ranges from about 100% for folic acid supplements taken on an empty stomach to about 50% for food folate.

Folate functions as a coenzyme for the metabolism of amino acids and their derivatives. Folate is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folate is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine. In 1998, knowing that it is not easy to get enough folate from food, the governments in both the United States and Canada passed a legislation for the mandatory fortification of all white wheat flour, and optional fortification of pasta and cornmeal with folic acid to reduce the risk of NTDs.

Folate exists in various foods of plant and animal origin. Rich dietary sources of "natural folate" are animal liver, dark green leafy vegetables (especially spinach, brussel sprouts, asparagus and broccoli), and legumes (especially beans and peas). Enriched white wheat flour, most pasta, some cereals, and citrus fruit juices are rich dietary sources of folic acid.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_FOL = 99999.999995, then FIDDTFOL = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTFOL = FIDD_FOL	Nutrient value is currently available

Value of FSDDDFOL	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTFOL = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTFOL	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTFOL <= 99999.999994	Sum of “naturally occurring folate” plus “folic acid” intake per day in micrograms

Mineral Nutrients (7 DVs)

1) Calcium intake from food sources in milligrams

Variable name: FSDDDCAL
Based on: FIDD_CAL, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all calcium intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Calcium plays a vital role in the maintenance of bones and teeth. About 99% of the calcium in the body is found in bones and teeth. The remaining one percent is found in the blood and other tissues. Calcium is required for the transmission of nerve impulses and the regulation of the heart's rhythm. Foods rich in calcium are dairy products, some dark green leafy vegetables (e.g. kale and bok choy), broccoli, legumes, and fortified orange juice.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Harvard School of Public Health. *Calcium & Milk* (version of 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Calcium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Temporary reformats

Condition(s)	Description
If FIDD_CAL = 99999.999995, then FIDDTCAL = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTCAL = FIDD_CAL	Nutrient value is currently available

Value of FSDDDCAL	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTCAL = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTCAL	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTCAL <= 99999.999994	Sum of calcium intake per day in milligrams

2) Phosphorus intake from food sources in milligrams

Variable name: FSDDDPHO
Based on: FIDD_PHO, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all phosphorus intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Phosphorus plays a vital role in the bone health along with calcium. About 85% of the adult human body's phosphorus is found in bones and teeth. Phosphorus is a major structural component of cell membranes and is involved in the intermediary metabolism of energy. Foods that contain high concentrations of phosphorus are meat, poultry, fish, eggs, and milk products.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press, 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Phosphorus*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_PHO = 99999.999995, then FIDDTPHO = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTPHO = FIDD_PHO	Nutrient value is currently available

Value of FSDDDPHO	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTPHO = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTPHO	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTPHO <= 99999.999994	Sum of phosphorus intake per day in milligrams

3) Magnesium intake from food sources in milligrams

Variable name: FSDDDMAG
Based on: FIDD_MAG, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all magnesium intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.

Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Magnesium plays an important role in the development of bones and teeth. 50-60% of all magnesium in the adult human body is found in the skeleton. This mineral nutrient is imperative for many biological processes, ranging from cell energy production and the creation of proteins and nucleic acids. Magnesium is also important for maintaining proper functioning of the muscles. Most green leafy vegetables, legumes, seeds, peas, beans, and nuts are rich in magnesium, as are some shellfish and whole grain cereals.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- The Linus Pauling Institute - Micronutrient Information Center. *Magnesium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_MAG = 99999.999995, then FIDDTMAG = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTMAG = FIDD_MAG	Nutrient value is currently available

Value of FSDDDMAG	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTMAG = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTMAG	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTMAG <= 99999.999994	Sum of magnesium intake per day in milligrams

4) Iron intake from food sources in milligrams

Variable name: FSDDDIRO
Based on: FIDD_IRO, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all iron intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Iron plays a vital role in the transport of oxygen from the lungs to the rest of the body and in cellular energy production. An adequate iron intake is important for the normal function of the immune system. There are two forms of dietary iron. Heme iron is absorved more efficiently, and is found in lean meats, poultry, and seafood. Good sources of non-heme iron are cooked legumes, nuts, seeds, and enriched cereals.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Temporary reformats

Condition(s)	Description
If FIDD_IRO = 99999.999995, then FIDDTIRO = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTIRO = FIDD_IRO	Nutrient value is currently available

Value of FSDDDIRO	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTIRO = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTIRO	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTIRO <= 99999.999994	Sum of iron intake per day in milligrams

5) Zinc intake from food sources in milligrams

Variable name: FSDDDZIN
Based on: FIDD_ZIN, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all zinc intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Zinc is involved in a multitude of human body functions and is part of many enzyme systems. Zinc is also necessary in the maintenance of protein structures and cell membranes and involved in the regulation of gene expression. This mineral nutrient is abundant in oysters, meat, and poultry. Nuts, legumes, and whole grains are also good sources of zinc.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc*. Washington, DC: National Academy Press, 2001.
- The Linus Pauling Institute - Micronutrient Information Center. *Zinc*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_ZIN = 99999.999995, then FIDDTZIN = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTZIN = FIDD_ZIN	Nutrient value is currently available

Value of FSDDDZIN	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTZIN = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTZIN	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTZIN <= 99999.999994	Sum of zinc intake per day in milligrams

6) Sodium intake from food sources in milligrams

Variable name: FSDDDSOD
Based on: FIDD_SOD, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all sodium intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: Sodium in human body is present on the surface of bone crystals, in the body's extracellular fluid (plasma) and in nerve and muscle tissue. Sodium influences nerve impulse conduction and muscle contraction control and is involved in regulating blood pressure and blood volume. The major source of sodium is sodium chloride or common table salt. Sodium is naturally present in milk, meats, eggs, water, and most vegetables.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- The Linus Pauling Institute - Micronutrient Information Center. *Sodium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Temporary reformats

Condition(s)	Description
If FIDD_SOD = 99999.999995, then FIDDTSOD = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTSOD = FIDD_SOD	Nutrient value is currently available

Value of FSDDDSOD	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTSOD = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTSOD	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTSOD <= 99999.999994	Sum of sodium intake per day in milligrams

7) Potassium intake from food sources in milligrams

Variable name: FSDDDPOT
Based on: FIDD_POT, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all potassium intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Nutrient functions and food sources: The normal functioning of the human body depends on the tight regulation of potassium concentrations both inside and outside of cells. Potassium is an important dietary mineral for transmission of nerve impulses, muscle contraction, and heart function. With sodium, potassium is involved in maintaining a normal water balance in human body. Good sources of potassium are fruits (especially banana, cantaloupe, honeydew, and orange), vegetables (especially potatoes, spinach, tomatoes, and squash), meat, and dairy products.
References and Internet sources:

- The Linus Pauling Institute - Micronutrient Information Center. *Potassium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Temporary reformats

Condition(s)	Description
If FIDD_POT = 99999.999995, then FIDDTPOT = 0	Set value to 0 to indicate this nutrient value is not currently available (i.e. indicating that the food item contributed to this nutrient, but the amount contributed is currently unknown)
Else, FIDDTPOT = FIDD_POT	Nutrient value is currently available

Value of FSDDDPOT	Condition(s)	Description
99999.999999(NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999(NS)	FIDDTPOT = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTPOT	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTPOT <= 99999.999994	Sum of potassium intake per day in milligrams

Caffeine & Moisture (2 DVs)

1) Caffeine intake from food sources in milligrams

Variable name: FSDDDCAF
Based on: FIDD_CAF, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all caffeine intakes from food sources in a single day in milligrams (mg).
Note (1): During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Note (2): Intakes from vitamin and mineral supplements are not included in this variable.
Caffeine functions and food sources: Caffeine is a natural ingredient found in the leaves, seeds or fruit of at least 63 plant species worldwide. Tea leaves, coffee, cocoa beans and kola nuts are used to make beverages and foods such as tea, coffee, cola drinks, and chocolate. For some adults, caffeine is likely to increase alertness or ability to concentrate and for some it could cause insomnia, headaches, irritability and nervousness. Recently Health Canada's scientists reviewed studies dealing with the impact of caffeine on human health and concluded that people who get an adequate daily amount of calcium have greater protection against the possible adverse effects of caffeine on their bone health.
References and Internet sites:

- Health Canada. *It's Your Health: Caffeine.* February 2006. Available at: http://www.hc-sc.gc.ca/iyh-vsv/food-aliment/caffeine_e.html (accessed in February 2006).
- IFIC Review - International Food Information Council Foundation. *Caffeine & Health: Clarifying the Controversies*. Available at: http://www.ific.org/publications/reviews/caffeineir.cfm (accessed March 2006).

Temporary reformats

Condition(s)	Description
If FIDD_CAF = 99999.999995, then FIDDTCAF = 0	Set value to 0 to indicate the caffeine value is not currently available (i.e. indicating that the food item contributed to the caffeine, but the amount contributed is currently unknown)
Else, FIDDTCAF = FIDD_CAF	Caffeine value is currently available

Value of FSDDDCAF	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTCAF = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTCAF	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTCAF <= 99999.999994	Sum of caffeine intake per day in milligrams

2) Moisture intake from food sources in grams

Variable name: FSDDDMOI
Based on: FIDD_MOI, FIDD_FID
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of all moisture intakes from food sources in a single day in grams (g).
Note: During the 24-hour dietary recall interview, the volume of human milk consumed was not quantified for infants and children who were breast-fed. Therefore, it was not possible to calculate the total energy and nutrient intakes for infants and children who were breast-fed.
Information about moisture: The moisture content of a food is quite literally the water content in that food. Water can be found in abundance in fruits and vegetables like romaine lettuce, tomatoes, grapefruit, and honeydew. Food sources that fall between 50 and 75 % water include potatoes, bananas, ice cream, and skinless chicken. The foods that are less than 35% water include bread, dry cereals, some cheeses, popcorn, and sugar.

Water serves as solvent for many substances including minerals like calcium and sodium and facilitates their biological reactions in the body. It is essential to give values for water content in published nutrient tables and research papers as variations in water content are important determinants of the levels of other nutritional components. Data on water content make it also possible to compare nutrient values.
References and Internet sites:

- Hamilton, Eva May Nunnelley et al. *Nutrition: Concepts and Controversies*. St. Paul: West Publishing Company, 1991 (5th Edition).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Temporary reformats

Condition(s)	Description
If FIDD_MOI = 99999.999995, then FIDDTMOI = 0	Set value to 0 to indicate moisture value is not currently available (i.e. indicating that the food item contributed to the moisture, but the amount contributed is currently unknown)
Else, FIDDTMOI = FIDD_MOI	Moisture value is currently available

Value of FSDDDMOI	Condition(s)	Description
99999.999999 (NS)	R24DFVAL = 2	24-hour dietary recall is invalid
99999.999999 (NS)	FIDDTMOI = NS	Infants/children who were breast-fed (see note 1)
0	R24DFLOW= 1	No food items reported
Sum of FIDDTMOI	FIDD_FID = (00, 10, 20, 30, 40) and 0 <= FIDDTMOI <= 99999.999994	Sum of moisture intake per day in grams

Frequency of supplement consumption (1 DV)

1) Number of days in the month a supplement was taken

Variable name: VMDDDDPM
Based on: VMDD_3, VMDD_N3, and VMDD_4
Previous Usage: This is a new derived variable
Description: This variable indicates how many days in the month the respondent took a particular supplement. Its purpose is to distinguish occasional supplement users from regular users for analysis purposes.

Temporary reformats

Condition(s)	Action
If VMDD_N3 = 1 then VMDDTDPM = 30 If VMDD_N3 = 2 then VMDDTDPM = VMDD_3/VMDD_4 * 52/12 If VMDD_N3 = 3 then VMDDTDPM = VMDD_3/VMDD_4	The number of days per month a supplement was taken

Value of VMDDDDPM	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_4 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
VMDDTDPM (to a maximum of 31)	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_4 <= NA)	The number of days per month a supplement was taken

Vitamin and Mineral Supplement Detail Variables (22 DVs)

Temporary reformats

Condition(s)	Action
If VMDD_N3 = 1 then TMPDOS = (VMDD_3*VMDD_5) If VMDD_N3 = 2 then TMPDOS = (VMDD_3*VMDD_5/7) If VMDD_N3 = 3 then TMPDOS = (VMDD_3*VMDD_5)/(366/12)	The individual's average daily dose of the supplement

1) Average daily carbohydrate intake from each supplement source, in grams

Variable name: VMDDDCAR
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDCAR, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of carbohydrate consumed from each supplement, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The primary function of carbohydrates is to provide energy to cells in the body, particularly the brain. On average, carbohydrates generate 4 kilocalories per gram of energy to the body. Dietary carbohydrates come in a variety of forms. The most common and abundant ones are sugars, starches, and fibers.

The basic building block of a carbohydrate is a glucose molecule, a simple union of carbon, hydrogen, and oxygen. Starches and fibers are essentially chains of glucose molecules. The human digestive system handles all digestible carbohydrates in much the same way – it breaks them down or tries to break them down into single glucose molecules so that they are small enough to cross into the bloodstream. Most cells use the glucose as a universal energy source.
References and Internet sites:

- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. Carbohydrates (version: 3/4/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. Perspectives in Nutrition. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDCAR	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDCAR/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in grams) of carbohydrate consumed from this supplement

2) Average daily dietary fibre intake from each supplement source, in grams

Variable name: VMDDDFI
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDFI, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of fibre consumed from each supplement, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Carbohydrate includes dietary fibre. Found only in foods of plant origin, dietary fibre is a group of substances which are resistant to digestion by enzymes produced by humans. Cellulose, lignin,

hemicelluloses, pectin, and gums are the five main types of dietary fibre. Fibres are divided into two general categories: water soluble and water insoluble. Fibres could delay the gastric emptying of ingested foods into the small intestine, resulting in a sensation of fullness, which may contribute to weight control. Fibres are also known to have a beneficial effect on the blood sugar level, because they slow the digestion of other foods and therefore cause a lower and a more gentle change in the blood sugar level.

References and Internet sites:

- Canadian Food Inspection Agency. *2003 Guide to Food Labeling and Advertising*. Available at: http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. *Fiber* (version: 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Fiber*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDFI	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDFI/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in grams) of fibre consumed from this supplement

3) Average daily calcium intake from each supplement source, in milligrams

Variable name: VMDDDCAL
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDCAL, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of calcium consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Calcium plays a vital role in the maintenance of bones and teeth. About 99% of the calcium in the body is found in bones and teeth. The remaining one percent is found in the blood and other tissues. Calcium is required for the transmission of nerve impulses and the regulation of the heart's rhythm.

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Harvard School of Public Health. *Calcium & Milk* (version of 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Calcium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VMDDDCAL	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDCAL/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of calcium consumed from this supplement

4) Average daily iron intake from each supplement source, in milligrams

Variable name: VMDDDIRO
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDIRO, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of iron consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Iron plays a vital role in the transport of oxygen from the lungs to the rest of the body and in cellular energy production. An adequate iron intake is important for the normal function of the immune system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VMDDDIRO	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDIRO/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of iron consumed from this supplement

5) Average daily magnesium intake from each supplement source, in milligrams

Variable name: VMDDDMAG
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDMAG, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of magnesium consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Magnesium plays an important role in the development of bones and teeth. 50-60% of all magnesium in the adult human body is found in the skeleton. This mineral nutrient is imperative for many biological processes, ranging from cell energy production and the creation of proteins and nucleic acids. Magnesium is also important for maintaining proper functioning of the muscles.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- The Linus Pauling Institute - Micronutrient Information Center. *Magnesium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDMAG	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDMAG/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of magnesium consumed from this supplement

6) Average daily phosphorus intake from each supplement source, in milligrams

Variable name: VMDDDPHO
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDPHO, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of phosphorus consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Phosphorus plays a vital role in bone health along with calcium. About 85% of the adult human body's phosphorus is found in bones and teeth. Phosphorus is a major structural component of cell membranes and is involved in the intermediary metabolism of energy.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press, 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Phosphorus*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDPHO	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDPHO/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of phosphorus consumed from this supplement

7) Average daily potassium intake from each supplement, in milligrams

Variable name: VMDDDPOT
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDPOT, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of potassium consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The normal functioning of the human body depends on the tight regulation of potassium concentrations both inside and outside of cells. Potassium is an important mineral for transmission of nerve impulses, muscle contraction, and heart function. With sodium, potassium is involved in maintaining a normal water balance in the human body.
References and Internet sources:

- The Linus Pauling Institute - Micronutrient Information Center. *Potassium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Value of VMDDDPOT	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDPOT/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of potassium consumed from this supplement

8) Average daily sodium intake from each supplement source, in milligrams

Variable name: VMDDDSOD
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDSOD, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of sodium consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Sodium in the human body is present on the surface of bone crystals, in the body's extracellular fluid (plasma) and in nerve and muscle tissue. Sodium influences nerve impulse conduction and muscle contraction control and is involved in regulating blood pressure and blood volume.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- The Linus Pauling Institute - Micronutrient Information Center. *Sodium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VMDDDSOD	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDSOD/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of sodium consumed from this supplement

9) Average daily zinc intake from each supplement source, in milligrams

Variable name: VMDDDZIN
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDZIN, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of zinc consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Zinc is involved in a multitude of human body functions and is part of many enzyme systems. Zinc is also necessary in the maintenance of protein structures and cell membranes and involved in the regulation of gene expression.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc*. Washington, DC: National Academy Press, 2001.
- The Linus Pauling Institute - Micronutrient Information Center. *Zinc*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDZIN	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDZIN/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of zinc consumed from this supplement

10) Average daily vitamin D intake from each supplement source, in micrograms

Variable name: VMDDDDMG
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDMG, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin D consumed from each supplement, in micrograms (mcg) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): Vitamin D was formerly expressed in international units (IU), but is now measured in micrograms (mcg).
Nutrient functions: Vitamin D is essential for the support of skeletal growth and bone strength through the maintenance of calcium and phosphorous homeostasis.
References and Internet sites:

- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Food fortification in Canada-Current Practices.* Available at: www.hc-sc.gc.ca/fn-an/nutrition/vitamin/fortification_factsheet1-fiche1_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin D*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDDMG	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDMG/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mcg) of vitamin D consumed from this supplement

11) Average daily vitamin C intake from each supplement source, in milligrams

Variable name: VMDDDC
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDC and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin C consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin C (or ascorbic acid) functions as an antioxidant with the ability to neutralize harmful free radicals, and to help make collagen, a tissue needed for healthy bones, teeth, gums and blood vessels. Vitamin C is also involved in supporting the immune system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin C.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines.

Value of VMDDDC	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDC/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of vitamin C consumed from this supplement

12) Average daily thiamin intake from each supplement source, in milligrams

Variable name: VMDDDTHI
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDTHI, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of thiamin consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The majority of the body's thiamin (vitamin B1) is concentrated in nerve and muscle cells. Thiamin facilitates energy metabolism, i.e. helps the body to process carbohydrates, protein and fat. This nutrient also plays a role in the proper functioning of nerve cells.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Thiamin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDTHI	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDTHI/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of thiamin consumed from this supplement

13) Average daily riboflavin intake from each supplement source, in milligrams

Variable name: VMDDDRIB
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDRIB, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of riboflavin consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Riboflavin (vitamin B2) functions as a coenzyme in many metabolic pathways and in energy production. In other cellular roles it can combat oxidative damage. This nutrient helps to maintain healthy eyes and skin and to produce red blood cells.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Riboflavin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDRIB	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDRIB/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of riboflavin consumed from this supplement

14) Average daily niacin intake from each supplement source, in milligrams of niacin equivalents

Variable name: VMDDDNIA
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDNIA, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of niacin consumed from each supplement, in milligrams (mg) of niacin equivalents (NE) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): For this variable, the niacin intakes are expressed in niacin equivalents (NE) which include both tryptophan and preformed niacin (i.e. nicotinic acid and nicotinamide). Tryptophan is an essential amino acid that can serve as the metabolic precursor of niacin. Niacin equivalents are calculated as the sum of the contributions in supplements from preformed niacin plus the niacin which the body can form from tryptophan.–
Nutrient functions: Niacin (vitamin B3) includes nicotinic acid and nicotinamide, which are both used by the body to form two coenzymes critical to numerous biological redox reactions including cellular energy production and metabolism. Niacin is also involved in the regulation of the total blood cholesterol level. The body's niacin requirement is met not only by nicotinic acid and nicotinamide present in the diet, but also by the conversion from dietary protein containing the amino acid tryptophan. On average, 1 milligram of niacin can be synthesized from the ingestion of 60 milligrams of tryptophan.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline.* Washington, DC: National Academy Press, 1998.
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Niacin.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VMDDDNIA	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDNIA/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg of NE) of niacin consumed from this supplement

15) Average daily vitamin B6 intake from each supplement source, in milligrams

Variable name: VMDDDB6
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDB6, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin B6 consumed from each supplement, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin B6 (pyridoxine and related compounds) functions as a coenzyme and plays a vital role in the metabolism of amino acids. Vitamin B6 helps form the heme component of red blood cells and healthy nervous system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B6.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDB6	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDB6/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mg) of vitamin B6 consumed from this supplement

16) Average daily vitamin B12 intake from each supplement source, in micrograms

Variable name: VMDDDB12
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDB12, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin B12 consumed from each supplement source, in micrograms (mcg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin B12 – along with folate and vitamin B6 – plays a vital role in DNA replication and maintenance. In addition, vitamin B12 is important for normal blood formation and neurological function.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B12.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VMDDDB12	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDB12/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mcg) of vitamin B12 consumed from this supplement

17) Average daily folic acid intake from each supplement source, in micrograms

Variable name: VMDDDFOA
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDFOA, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of folic acid consumed from each supplement source, in micrograms (mcg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate", called "food folate", and the added synthetic form of folate, called "folic acid". Folic acid is the most oxidized and stable form of folate which is added to dietary supplements and fortified foods, like cereals and pasta. Folic acid is better absorbed and more readily available to the body than naturally occurring folate.

Folic acid functions as a coenzyme for the metabolism of amino acids and their derivatives. Folic acid is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folic acid is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDDFOA	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDFOA/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mcg) of folic acid consumed from this supplement

18) Average daily linoleic fatty acid intake from each supplement source, in grams

Variable name: VMDDDFAL
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDFAL, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of linoleic fatty acid consumed from each supplement, in grams (g).
Note: Intakes from foods are not included in this variable.
Nutrient functions and food sources: Linoleic is an essential omega-6 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in immune system function and vision, and helps form cell membranes and hormones. The human body cannot synthesize linoleic acid; this acid can only be obtained from dietary/supplemental sources.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: **http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm** (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDDFAL	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDFAL/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in grams) of linoleic acid consumed from this supplement

19) Average daily linolenic fatty acid intake from each supplement source, in grams

Variable name: VMDDDFAN
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDFAN, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of linolenic fatty acid consumed from each supplement, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions and food sources: Linolenic is an essential omega-3 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in blood clotting, immune system function and vision, and helps form cell membranes and hormones (eicosonoids). The human body cannot synthesize linolenic acid; this acid can only be obtained from dietary/supplemental sources.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDDFAN	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDFAN/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in grams) of linolenic acid consumed from this supplement

20) Average daily vitamin E intake from each supplement source, in milligrams of alpha-tocopherol equivalents

Variable name: VMDDDATE
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDATE, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin E consumed from each supplement; in milligrams (mg) of alpha-tocopherol equivalents (see Note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): "Vitamin E" is a term used to describe 8 antioxidants (4 tocopherols (alpha-, beta-, gamma-, & delta-) and 4 tocotrienols (alpha-, beta-, gamma-, & delta-). The form that is maintained in the human body is alpha-tocopherol.
Nutrient functions: Alpha-tocopherol's primary function in the human body is of an antioxidant. The fats in cell membranes and low density lipoproteins (LDLs) are susceptible to oxidation by free radicals, which are formed during normal metabolism or when a person is exposed to pollutants such as cigarette smoke. Alpha-tocopherol intercepts the free radicals, preventing any damage from occurring. Once the free radical is neutralized, the antioxidant capacity of alpha-tocopherol is lost, however it can be regenerated by other antioxidants, such as vitamin C.
References and Internet sites:

- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin E.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VMDDDATE	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDATE/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount of vitamin E (in mg of alpha-tocopherol equivalents) consumed from this supplement

21) Average daily vitamin A intake from each supplement source, in micrograms of retinol equivalents

Variable name: VMDDDA
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDA, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin A consumed from each supplement, in micrograms (mcg) of retinol equivalents (RE) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): Vitamin A (retinol) is a generic term for a large number of related compounds. Retinol, retinal, and retinoic acid are often referred to as "preformed vitamin A" (or preformed retinoids). The preformed vitamin A is

found almost exclusively in animal-derived foods (e.g. animal liver and fish liver oils). The efficiency of absorption of preformed vitamin A in the human body is generally high.

In addition to preformed vitamin A, Beta-carotene and other carotenoids that can be converted by the body into retinol are referred to as "provitamin A carotenoids" (or vitamin A precursors). This form of provitamin A exists exclusively in plants (including vegetable oils, fruits and vegetables). Although several hundred carotenoids exist in plant origins, only about 10%, most notably Beta-carotene, yield significant vitamin A activity. Overall, the amount of vitamin A activity of "provitamin A carotenoids" is considerably lower than that of preformed vitamin A, but the amount of carotenoids available from food is much higher than retinol so their contribution is critical.

The standard of measure of vitamin A used for the supplement data is retinol equivalents (RE) which represents the sum of vitamin A as retinol and the carotenoid content after conversion. The following equivalencies can be used to account for the lower vitamin A activity of carotenoids:

1 RE = 1 mcg retinol
1 RE = 6 mcg of Beta-carotene
1 RE = 12 mcg of other carotenoids

Therefore, when calculating the amount of the total vitamin A activity for supplements containing both retinol and carotenoids, the following formula is used:

RE = 1 mcg retinol + mcg Beta-carotene/6 + mcg other carotenoids/12

Nutrient functions: Vitamin A is an essential nutrient needed in small amounts in the human body for healthy skin, bones and teeth. Vitamin A plays a vital role in proper vision. Through a distinct mechanism, vitamin A has systemic functions which stimulate the production and activity of white blood cells and regulate cell growth and division. Vitamin A is commonly known as the anti-infective vitamin, because it is required for normal functioning of the immune system.

References and Internet sources:

- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc.* Washington, DC: National Academy Press, 2001.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed November 2007).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin A*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Value of VMDDDA	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDA/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mcg RE) of vitamin A consumed from this supplement

22) Average daily folic acid intake from each supplement source, in micrograms of dietary folate equivalents

Variable name: VMDDDDFE
Based on: VMDD_3, VMDD_N3, VMDD_5, VDCDDDFE, and VDCD_DOS
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of folic acid consumed from each supplement source, micrograms (mcg) in dietary folate equivalents (DFE). DFE is a measuring unit that takes into account the differences in the bioavailability of natural folate and folic acid (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): There are two chemical forms that contribute to folate bioactivity: "naturally occurring folate" also called "food folate" and the added synthetic form of folate called "folic acid". Since the late 1990s, a new measuring unit called Dietary Folate Equivalents (DFE) has become common for calculating the total activity of food folate and folic acid. DFE takes into account the differences in the bioavailability of the two forms of folate; meaning it adjusts for the nearly 50% lower bioavailability (i.e. less absorption in the body) of food folate compared to that of folic acid. The DFE formula for supplements of folic acid: 1 DFE = (mcg of folic acid x 2).
Nutrient functions: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. Most naturally occurring folate is called "food folate" which includes various forms of folate found naturally in foods. "Folic acid" refers to the most oxidized and stable form of folate which is added to supplements and fortified foods. The bioavailability (i.e. degree of absorption in the body) of folate ranges from about 100% for folic acid supplements taken on an empty stomach to about 50% for food folate.

Folate functions as a coenzyme for the metabolism of amino acids and their derivatives. Folate is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folate is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine.

References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VMDDDDFE	Condition(s)	Description
99999.999999 (NS)	VMDD_3 = DK, R, NS or VMDD_N3 = DK, R, NS or VMDD_5 = DK, R, NS	At least one required question was not answered (don't know, refusal, not stated)
TMPDOS*VDCDDDFE/VDCD_DOS	(0 < VMDD_3 < NA) and (0 < VMDD_N3 < NA) and (0 < VMDD_5 < NA)	The average daily amount (in mcg of DFE) of folic acid consumed from this supplement

Vitamin and Mineral Supplement Summary Variables (22 DVs)

1) Average daily carbohydrate intake from all supplement sources, in grams

Variable name: VSDDDCAR
Based on: VMDDDCAR, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily carbohydrate intake from all supplement sources, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions and food sources: The primary function of carbohydrates is to provide energy to cells in the body, particularly the brain. On average, carbohydrates generate 4 kilocalories per gram of energy to the body. Dietary carbohydrates come in a variety of forms. The most common and abundant ones are sugars, starches, and fibers.

The basic building block of a carbohydrate is a glucose molecule, a simple union of carbon, hydrogen, and oxygen. Starches and fibers are essentially chains of glucose molecules. The human digestive system handles all digestible carbohydrates in much the same way – it breaks them down or tries to break them down into single glucose molecules so that they are small enough to cross into the bloodstream. Most cells use the glucose as a universal energy source.
References and Internet sites:

- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. Carbohydrates (version: 3/4/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. Perspectives in Nutrition. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDCAR	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDCAR = DK, R, NS	One or more required questions not answered
Sum of VMDDDCAR	0 <= VMDDDCAR < NA	Total average daily intake of carbohydrate (in grams) from supplements

2) Average daily dietary fibre intake from all supplement sources, in grams

Variable name: VSDDDFI
Based on: VMDDDFI, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily fibre intake from all supplement sources, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions and food sources: Carbohydrate includes dietary fibre. Found only in foods of plant origin, dietary fibre is a group of substances which are resistant to digestion by enzymes produced by humans. Cellulose, lignin, hemicelluloses, pectin, and gums are the five main types of dietary fibre. Fibres are divided into two general categories: water soluble and water insoluble. Fibres could delay the gastric emptying of ingested foods into the small intestine, resulting in a sensation of fullness, which may contribute to weight control. Fibres are also known to have a beneficial effect on the blood sugar level, because they slow the digestion of other foods and therefore cause a lower and a more gentle change in the blood sugar level.

References and Internet sites:

- Canadian Food Inspection Agency. *2003 Guide to Food Labeling and Advertising*. Available at: http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Harvard School of Public Health. *Fiber* (version: 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Fiber*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDFI	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDFI = DK, R, NS	One or more required questions not answered
Sum of VMDDDFI	0 <= VMDDDFI < NA	Total average daily intake of fibre (in grams) from supplements

3) Average daily calcium intake from all supplement sources, in milligrams

Variable name: VSDDDCAL
Based on: VMDDDCAL, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily calcium intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Calcium plays a vital role in the maintenance of bones and teeth. About 99% of the calcium in the body is found in bones and teeth. The remaining one percent is found in the blood and other tissues. Calcium is required for the transmission of nerve impulses and the regulation of the heart's rhythm.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Harvard School of Public Health. *Calcium & Milk* (version of 12/13/2004). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Calcium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VSDDDCAL	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDCAL = DK, R, NS	One or more required questions not answered
Sum of VMDDDCAL	0 <= VMDDDCAL < NA	Total average daily intake of calcium (in mg) from supplements

4) Average daily iron intake from all supplement sources, in milligrams

Variable name: VSDDDIRO
Based on: VMDDDIRO, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily iron intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Iron plays a vital role in the transport of oxygen from the lungs to the rest of the body and in cellular energy production. An adequate iron intake is important for the normal function of the immune system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VSDDDIRO	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDIRO = DK, R, NS	One or more required questions not answered
Sum of VMDDDIRO	0 <= VMDDDIRO < NA	Total average daily intake of iron (in mg) from supplements

5) Average daily magnesium intake from all supplement sources, in milligrams

Variable name: VSDDDMAG
Based on: VMDDDMAG, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily magnesium intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Magnesium plays an important role in the development of bones and teeth. 50-60% of all magnesium in the adult human body is found in the skeleton. This mineral nutrient is imperative for many biological processes, ranging from cell energy production and the creation of proteins and nucleic acids. Magnesium is also important for maintaining proper functioning of the muscles.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- The Linus Pauling Institute - Micronutrient Information Center. *Magnesium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDMAG	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDMAG = DK, R, NS	One or more required questions not answered
Sum of VMDDDMAG	0 <= VMDDDMAG < NA	Total average daily intake of magnesium (in mg) from supplements

6) Average daily phosphorus intake from all supplement sources, in milligrams

Variable name: VSDDDPHO
Based on: VMDDDPHO, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily phosphorus intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Phosphorus plays a vital role in bone health along with calcium. About 85% of the adult human body's phosphorus is found in bones and teeth. Phosphorus is a major structural component of cell membranes and is involved in the intermediary metabolism of energy.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press, 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Phosphorus*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDPHO	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDPHO = DK, R, NS	One or more required questions not answered
Sum of VMDDDPHO	0 <= VMDDDPHO < NA	Total average daily intake of phosphorus (in mg) from supplements

7) Average daily potassium intake from all supplement sources, in milligrams

Variable name: VSDDDPOT
Based on: VMDDDPOT, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily potassium intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The normal functioning of the human body depends on the tight regulation of potassium concentrations both inside and outside of cells. Potassium is an important dietary mineral for transmission of

nerve impulses, muscle contraction, and heart function. With sodium, potassium is involved in maintaining a normal water balance in the human body.

References and Internet sources:

- The Linus Pauling Institute - Micronutrient Information Center. *Potassium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Value of VSDDDPOT	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDPOT = DK, R, NS	One or more required questions not answered
Sum of VMDDDPOT	0 <= VMDDDPOT < NA	Total average daily intake of potassium (in mg) from supplements

8) Average daily sodium intake from all supplement sources, in milligrams

Variable name: VSDDDSOD
Based on: VMDDDSOD, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily sodium intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Sodium in the human body is present on the surface of bone crystals, in the body's extracellular fluid (plasma) and in nerve and muscle tissue. Sodium influences nerve impulse conduction and muscle contraction control and is involved in regulating blood pressure and blood volume.

References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- The Linus Pauling Institute - Micronutrient Information Center. *Sodium*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VSDDDSOD	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDSOD = DK, R, NS	One or more required questions not answered
Sum of VMDDDSOD	0 <= VMDDDSOD < NA	Total average daily intake of sodium (in mg) from supplements

9) Average daily zinc intake from all supplement sources, in milligrams

Variable name: VSDDDZIN
Based on: VMDDDZIN, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily zinc intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Zinc is involved in a multitude of human body functions and is part of many enzyme systems. Zinc is also necessary in the maintenance of protein structures and cell membranes and involved in the regulation of gene expression.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc*. Washington, DC: National Academy Press, 2001.
- The Linus Pauling Institute - Micronutrient Information Center. *Zinc*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDZIN	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDZIN = DK, R, NS	One or more required questions not answered
Sum of VMDDDZIN	0 <= VMDDDZIN < NA	Total average daily intake of zinc (in mg) from supplements

10) Average daily vitamin D intake from all supplement sources, in micrograms

Variable name: VSDDDDMG
Based on: VMDDDDMG, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily vitamin D intake from all supplement sources, in micrograms (mcg) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): Vitamin D was formerly expressed in international units (IU), but is now measured in micrograms (mcg).
Nutrient functions: Vitamin D is essential for the support of skeletal growth and bone strength through the maintenance of calcium and phosphorous homeostasis.
References and Internet sites:

- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Food fortification in Canada-Current Practices.* Available at: www.hc-sc.gc.ca/fn-an/nutrition/vitamin/fortification_factsheet1-fiche1_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin D*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDDMG	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDDMG = DK, R, NS	One or more required questions not answered
Sum of VMDDDDMG	0 <= VMDDDDMG < NA	Total average daily intake of vitamin D (in mcg) from supplements

11) Average daily vitamin C intake from all supplement sources, in milligrams

Variable name: VSDDDC
Based on: VMDDDC, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily vitamin C intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin C (or ascorbic acid) functions as an antioxidant with the ability to neutralize harmful free radicals, and to help make collagen, a tissue needed for healthy bones, teeth, gums and blood vessels. Vitamin C is also involved in supporting the immune system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin C.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines.

Value of VSDDDC	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDC = DK, R, NS	One or more required questions not answered
Sum of VMDDDC	0 <= VMDDDC < NA	Total average daily intake of vitamin C (in mg) from supplements

12) Average daily thiamin intake from all supplement sources, in milligrams

Variable name: VSDDDTHI
Based on: VMDDDTHI, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily thiamin intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The majority of the body's thiamin (vitamin B1) is concentrated in nerve and muscle cells. Thiamin facilitates energy metabolism, i.e. helps the body to process carbohydrates, protein and fat. This nutrient also plays a role in the proper functioning of nerve cells.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Thiamin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDTHI	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDTHI = DK, R, NS	One or more required questions not answered
Sum of VMDDDTHI	0 <= VMDDDTHI < NA	Total average daily intake of thiamin (in mg) from supplements

13) Average daily riboflavin intake from all supplement sources, in milligrams

Variable name: VSDDDRIB
Based on: VMDDDRIB, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily riboflavin intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Riboflavin (vitamin B2) functions as a coenzyme in many metabolic pathways and in energy production. In other cellular roles it can combat oxidative damage. This nutrient helps to maintain healthy eyes and skin and to produce red blood cells.
References and Internet sources:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride.* Washington, DC: National Academy Press. 1997.
- The Linus Pauling Institute - Micronutrient Information Center. *Riboflavin*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDRIB	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDRIB = DK, R, NS	One or more required questions not answered
Sum of VMDDDRIB	0 <= VMDDDRIB < NA	Total average daily intake of riboflavin (in mg) from supplements

14) Average daily niacin intake from all supplement sources, in milligrams of niacin equivalents

Variable name: VSDDDNIA
Based on: VMDDDNIA, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily niacin intake from all supplement sources, in milligrams (mg) of niacin equivalents (NE) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): For this variable, the niacin intakes are expressed in niacin equivalents (NE) which include both tryptophan and preformed niacin (i.e. nicotinic acid and nicotinamide). Tryptophan is an essential amino acid that can serve as the metabolic precursor of niacin. Niacin equivalents are calculated as the sum of the contributions in supplements from preformed niacin plus the niacin which the body can form from tryptophan.–
Nutrient functions: Niacin (vitamin B3) includes nicotinic acid and nicotinamide, which are both used by the body to form two coenzymes critical to numerous biological redox reactions including cellular energy production and metabolism. Niacin is also involved in the regulation of the total blood cholesterol level. The body's niacin requirement is met not only by nicotinic acid and nicotinamide present in the diet, but also by the conversion from dietary protein containing the amino acid tryptophan. On average, 1 milligram of niacin can be synthesized from the ingestion of 60 milligrams of tryptophan.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline.* Washington, DC: National Academy Press, 1998.
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Niacin.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VSDDDNIA	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDNIA = DK, R, NS	One or more required questions not answered
Sum of VMDDDNIA	0 <= VMDDDNIA < NA	Total average daily intake of niacin (in mg of NE) from supplements

15) Average daily vitamin B6 intake from all supplement sources, in milligrams

Variable name: VSDDDB6
Based on: VMDDDB6, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily vitamin B6 intake from all supplement sources, in milligrams (mg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin B6 (pyridoxine and related compounds) functions as a coenzyme and plays a vital role in the metabolism of amino acids. Vitamin B6 helps form the heme component of red blood cells and healthy nervous system.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B6.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDB6	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDB6 = DK, R, NS	One or more required questions not answered
Sum of VMDDDB6	0 <= VMDDDB6 < NA	Total average daily intake of vitamin B6 (in mg) from supplements

16) Average daily vitamin B12 intake from all supplement sources, in micrograms

Variable name: VSDDDB12
Based on: VMDDDB12, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily vitamin B12 intake from all supplement sources, in micrograms (mcg).
Note (1): Intakes from food sources are not included in this variable.
Nutrient functions: Vitamin B12 – along with folate and vitamin B6 – plays a vital role in DNA replication and maintenance. In addition, vitamin B12 is important for normal blood formation and neurological function.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Food Group Use.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin B12.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.

Value of VSDDDB12	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDB12 = DK, R, NS	One or more required questions not answered
Sum of VMDDDB12	0 <= VMDDDB12 < NA	Total average daily intake of vitamin B12 (in mcg) from supplements

17) Average daily folic acid intake from all supplement sources, in micrograms

Variable name: VSDDDFOA
Based on: VMDDDFOA, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily folic acid intake from all supplement sources, in micrograms (mcg).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate", called "food folate", and the added synthetic form of folate, called "folic acid". Folic acid is the most oxidized and stable form of folate which is added to dietary supplements and fortified foods, like cereals and pasta. Folic acid is better absorbed and more readily available to the body than naturally occurring folate.

Folic acid functions as a coenzyme for the metabolism of amino acids and their derivatives. Folic acid is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folic acid is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDFOA	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDFOA = DK, R, NS	One or more required questions not answered
Sum of VMDDDFOA	0 <= VMDDDFOA < NA	Total average daily intake of folic acid (in mcg) from supplements

18) Average daily linoleic fatty acid intake from all supplement sources, in grams

Variable name: VSDDDFAL
Based on: VMDDDFAL, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily linoleic fatty acid intake from all supplement sources, in grams (g).
Note: Intakes from foods are not included in this variable.
Nutrient functions and food sources: Linoleic is an essential omega-6 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in immune system function and vision, and helps form cell membranes and hormones. The human body cannot synthesize linoleic acid; this acid can only be obtained from dietary/supplemental sources.
References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: **http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm** (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids.* Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDFAL	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDFAL = DK, R, NS	One or more required questions not answered
Sum of VMDDDFAL	0 <= VMDDDFAL < NA	Total average daily intake of linoleic acid (in grams) from supplements

19) Average daily linolenic fatty acid intake from all supplement sources, in grams

Variable name: VSDDDFAN
Based on: VMDDDFAN, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily linolenic fatty acid intake from all supplement sources, in grams (g).
Note: Intakes from food sources are not included in this variable.
Nutrient functions: Linolenic is an essential omega-3 polyunsaturated fatty acid which forms parts of vital body structures, performs important roles in blood clotting, immune system function and vision, and helps form cell

membranes and hormones (eicosonoids). The human body cannot synthesize linolenic acid; this acid can only be obtained from dietary/supplemental sources.

References and Internet sites:

- American Dietetic Association. *A Primer on Fats and Oils.* Available at: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_1034_ENU_HTML.htm (accessed February 2006).
- Food and Nutrition Board, Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein and Amino Acids. Washington, DC: National Academy Press, 2002/2005.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDFAN	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDFAN = DK, R, NS	One or more required questions not answered
Sum of VMDDDFAN	0 <= VMDDDFAN < NA	Total average daily intake of linolenic acid (in grams) from supplements

20) Average vitamin E intake from all supplement sources, in milligrams alpha-tocopherol equivalents

Variable name: VSDDDATE
Based on: VMDDDATE, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is the average daily amount of vitamin E consumed from each vitamin and mineral supplement; in milligrams (mg) of alpha-tocopherol equivalents (see Note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): "Vitamin E" is a term used to describe 8 antioxidants (4 tocopherols (alpha-, beta-, gamma-, & delta-) and 4 tocotrienols (alpha-, beta-, gamma-, & delta-). The form that is maintained in the human body is alpha-tocopherol.
Nutrient functions: Alpha-tocopherol's primary function in the human body is of an antioxidant. The fats in cell membranes and low density lipoproteins (LDLs) are susceptible to oxidation by free radicals, which are formed during normal metabolism or when a person is exposed to pollutants such as cigarette smoke. Alpha-tocopherol intercepts the free radicals, preventing any damage from occurring. Once the free radical is neutralized, the antioxidant capacity of alpha-tocopherol is lost, however it can be regenerated by other antioxidants, such as vitamin C.

References and Internet sites:

- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin C.* Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).

Value of VSDDDATE	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VSDDDATE = DK, R, NS	One or more required questions not answered
Sum of VSDDDATE	0 <= VSDDDATE < NA	Total average daily intake of vitamin E (in mg alpha-tocopherol equivalents) from supplements

21) Average daily vitamin A intake from all supplement sources, in micrograms of retinol equivalents

Variable name: VSDDDA
Based on: VMDDDA, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily vitamin A intake from all supplement sources, in micrograms (mcg) of retinol equivalents (RE) (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): Vitamin A (retinol) is a generic term for a large number of related compounds. Retinol, retinal, and retinoic acid are often referred to as "preformed vitamin A" (or preformed retinoids). The preformed vitamin A is found almost exclusively in animal-derived foods (e.g. animal liver and fish liver oils). The efficiency of absorption of preformed vitamin A in the human body is generally high.

In addition to preformed vitamin A, Beta-carotene and other carotenoids that can be converted by the body into retinol are referred to as "provitamin A carotenoids" (or vitamin A precursors). This form of provitamin A exists exclusively in plants (including vegetable oils, fruits and vegetables). Although several hundred carotenoids exist in plant origins, only about 10%, most notable Beta-carotene, yield significant vitamin A activity. Overall, the amount of vitamin A activity of "provitamin A carotenoids" is considerably lower than that of preformed vitamin A, but the amount of carotenoids available from food is much higher than retinol so their contribution is critical.

The standard of measure of vitamin A used for the supplement data is retinol equivalents (RE) which represents the sum of vitamin A as retinol and the carotenoid content after conversion. The following equivalencies can be used to account for the lower vitamin A activity of carotenoids:

1 RE = 1 mcg retinol
1 RE = 6 mcg of Beta-carotene
1 RE = 12 mcg of other carotenoids

Therefore, when calculating the amount of the total vitamin A activity for supplements containing both retinol and carotenoids, the following formula is used:

RE = 1 mcg retinol + mcg Beta-carotene/6 + mcg other carotenoids/12

Nutrient functions: Vitamin A is an essential nutrient needed in small amounts in the human body for healthy skin, bones and teeth. Vitamin A plays a vital role in proper vision. Through a distinct mechanism, vitamin A has systemic functions which stimulate the production and activity of white blood cells and regulate cell growth and division. Vitamin A is commonly known as the anti-infective vitamin, because it is required for normal functioning of the immune system.

References and Internet sources:

- Food and Agriculture Organization of the United Nations. *Human Vitamin and Mineral Requirements.* 2001. Available at: http://www.fao.org (accessed January 2005).
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc.* Washington, DC: National Academy Press, 2001.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- The Linus Pauling Institute - Micronutrient Information Center. *Vitamin A*. Available at: http://lpi.oregonstate.edu/infocenter/index.html (accessed February 2006).
- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- U.S. Department of Health and Human Services. *Dietary Guidelines for Americans. 2005.* Available at: www.health.gov/dietaryguidelines (accessed February 2006).

Value of VSDDDA	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDA = DK, R, NS	One or more required questions not answered
Sum of VMDDDA	0 <= VMDDDA < NA	Total average daily intake of vitamin A (in mcg RE) from supplements

22) Average daily folic acid intake from all supplement sources, in micrograms of dietary folate equivalents

Variable name: VSDDDDFE
Based on: VMDDDDFE, VSDD_01, VSDD_13
Previous usage: This is a new derived variable.
Description: This variable is a roll-up of an individual's average daily folic acid intake from all supplement sources, in micrograms (mcg) of dietary folate equivalents (DFE). DFE is a measuring unit that takes into account the differences in the bioavailability of natural folate and folic acid (see note 2).
Note (1): Intakes from food sources are not included in this variable.
Note (2): There are two chemical forms now in foods that contribute to folate bioactivity: "naturally occurring folate" called "food folate" and the added synthetic form of folate called "folic acid". Since the late 1990s, a new measuring unit called Dietary Folate Equivalents (DFE) has become common for calculating the total activity of food folate and folic acid. DFE takes into account the differences in the bioavailability of the two forms of folate; meaning it adjusts for the nearly 50% lower bioavailability (i.e. less absorption in the body) of food folate compared to that of folic acid. The DFE formula for supplements of folic acid: 1 DFE = (mcg of folic acid x 2).
Nutrient functions: The word "folate" is a generic name for this B-complex vitamin which functions in single-carbon transfer reactions and exists in many chemical forms. Most naturally occurring folate is called "food folate" which includes various forms of folate found naturally in foods. "Folic acid" refers to the most oxidized and stable form of folate which is added to supplements and fortified foods. The bioavailability (i.e. degree of absorption in the body) of folate ranges from about 100% for folic acid supplements taken on an empty stomach to about 50% for food folate.

Folate functions as a coenzyme for the metabolism of amino acids and their derivatives. Folate is also essential for DNA synthesis and maintenance of DNA integrity; therefore, folate is required for cell growth and replication. A deficiency of folate among women capable of becoming pregnant has been linked to the risk of having a fetus with Neural Tube Defects (NTDs). These are serious birth defects that consist of abnormalities in the baby's brain, skull or spine.
References and Internet sites:

- B.C. Ministry of Health Services. *British Columbia Nutrition Survey: Report on Energy and Nutrient Intakes.* March 2004. Available at: http://www.healthservices.gov.bc.ca/prevent/nutrition.
- Food and Nutrition Board, Institute of Medicine. *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin and Choline*. Washington, DC: National Academy Press, 1998.
- Harvard School of Public Health. *Vitamins: Nutrition Source* (Version of 6/6/2005). Available at: http://www.hsph.harvard.edu/nutritionsource/index.html (accessed February 2006).
- Health Canada. *Canadian Nutrient File – User's Guide, 2005*. Available at: www.hc-sc.gc.ca/fn-an/nutrition/fiche-nutri-data/cnf_downloads-telechargement_fcen_e.html (accessed February 2006).
- Health Canada. *Food and Drugs Act and Food and Drug Regulations*. Minister of Public Works and Services Canada (2004) http://www.hc-sc.gc.ca/fn-an/legislation/acts-lois/fda-lad/index_e.html
- Health Canada. It's *Your Health – Folic Acid and Birth Defects.* Available at: http://www.hc-sc.gc.ca/iyh-vsv/med/folic-folique_e.html (accessed February 2006).

- Mahan LK, Escott-Stump S. *Krause's Food, Nutrition, & Diet Therapy*. Philadelphia: Saunders, 2004.
- Wardlaw, Gordon M. et al. *Perspectives in Nutrition*. New York: McGraw-Hill, 2004 (6th edition).

Value of VSDDDDFE	Condition(s)	Description
99999.999996 (NA)	VSDD_01 = 2	No supplements reported
99999.999999 (NS)	VSDD_13 = DK, R, NS	Supplement not recorded
99999.999999 (NS)	VMDDDDFE = DK, R, NS	One or more required questions not answered
Sum of VMDDDDFE	0 <= VMDDDDFE < NA	Total average daily intake of folic acid (in mcg DFE) from supplements

Location of Food Preparation (1 DV)

1) Location of food preparation

Variable name: FIDDDLOC
Based on: FIDD_LHM, FIDD_LOT
Previous usage: This is a new derived variable.
Description: This variable identifies the location where the reported food was prepared.
Note (1): When responding to the question about where the reported food was prepared, some respondents may have provided the information about the location where they consumed their food rather than the location where the food was prepared. In other words, it cannot be assumed that this variable reflects only the location where the food was prepared.
Note (2): For this derived variable, infants and children who were breast-fed were set to "Not applicable", because the concept of "location of food preparation" is not relevant to breast-feeding.

Value of FIDDDLOC	Condition(s)	Description
96 (NA)	FIDD_LHM = NA	Infants/children who were breast-fed (see note 2)
99 (NS)	(FIDD_LHM = DK, R, NS) or (FIDD_LHM = 2 and FIDD_LOT= DK, R, NS)	Required question was not answered (don't know, refusal, not stated)
1	FIDD_LHM = 1	At home
2	FIDD_LHM = 2 and FIDD_LOT= 1	Restaurant with waiter/waitress
3	FIDD_LHM = 2 and FIDD_LOT= 2	Restaurant fast food/pizza
4	FIDD_LHM = 2 and FIDD_LOT= 3	Bar/tavern/lounge
5	FIDD_LHM = 2 and FIDD_LOT= 4	Take-out
6	FIDD_LHM = 2 and FIDD_LOT= 5	Vending machine
7	FIDD_LHM = 2 and FIDD_LOT= 6	Restaurant, no additional information provided
8	FIDD_LHM = 2 and FIDD_LOT= 7	Cafeteria, not at school
9	FIDD_LHM = 2 and FIDD_LOT= 8	Cafeteria, at school
10	FIDD_LHM = 2 and FIDD_LOT= 9	Child care centre
11	FIDD_LHM = 2 and FIDD_LOT= 10	Family/Adult care centre
12	FIDD_LHM = 2 and FIDD_LOT= 11	Someone else's home
13	FIDD_LHM = 2 and FIDD_LOT= 12	Other
14	FIDD_LHM = 2 and FIDD_LOT= 13	Grocery store/corner store/other types of store
15	FIDD_LHM = 2 and FIDD_LOT= 14	At work

Food Description (FDC) File (1 DV)

1) Total number of times – food code assigned

Variable name: FDCDDCOD
Based on: FIDD_CDE
Previous usage: This is a new derived variable.
Description: The Food Description (FDC) file contains all NSS[4] codes that were available during the coding of the food items. This variable presents the total number of times that a code was assigned to a food reported during the first or second 24-hour dietary recalls.
Note (1): Intakes from vitamin and mineral supplements are not included in this variable.
Note (2): The second 24-hour dietary recall was administered to only 30% of the respondents.

Value of FDCDDCOD	Condition(s)	Description
0	FIDD_CDE = 0	No corresponding food item was coded
Sum of FIDD_CDE	1 <= FIDD_CDE <= 999995	Total number of times that a corresponding food item was coded

4. Nutrition Survey System (NSS) is a software application developed by the Food Directorate of Health Canada which can be used for processing of the 24-hour dietary recall data. For more information about NSS and its role in CCHS Cycle 2.2, please see the User Guide for CCHS Cycle 2.2.