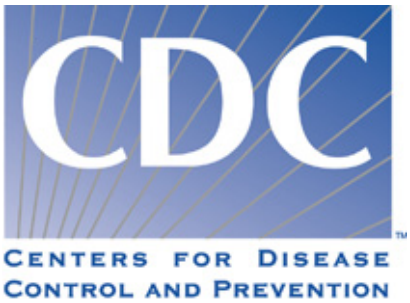
Calculated Variables

in the Data File of the

2013 Behavioral Risk Factor Surveillance System

(September 24, 2014)



INTRODUCTION:

This document provides information on calculated variables for the 2013 Behavioral Risk Factor Surveillance System survey. BRFSS calculates these variables from the participants' responses to survey questions. There are three types of calculated variables:

1. Variables used to stratify and weight the data (This type is not included in this document.);

2. Intermediate variables, which users derive from a question response and are useful in the calculation of some other variable or risk factor.

Example: Users derive WTKG2 from the WEIGHT2 variable in the survey, in order to calculate the body mass index variable (_BMI4). Most—but not all—of the intermediate variables end with an underscore, such as FTJUDAY_.

3. Variables for categorizing or classifying respondents.
Most of these variables begin with an underscore such as _BMI4.
Exceptions are: _DENSTR2, _GEOSTR, and _STATE, which BRFSS determines before the interview.
Some of the calculated variables group continuous variables—such as weight, age, or body mass index— into categories. Other calculated variables regroup non-continuous variables to simplify analyses. The common focus of these variables is on health behaviors related to a risk of illness or injury.

The tables in this report include a description of what the responses mean and a copy of the code used to calculate these variables in SAS®. The syntax of the code, as given, may or may not work in the particular statistical program that you are using. Users should refer to the appropriate SPSS, SUDAAN, SAS, or other software user manuals for compatible variables names and functions used within the SAS code provided.

New calculated variables added in 2013 are listed below. For a complete list of calculated variables included in the 2013 dataset see the list at the end of this document.

_CHISPNC;
_CRACE1;
_FLSHOT6;
_FRTLT1;
_HISPANC;
_IMPCAGE;
_IMPCRAC;
_IMPCSEX;
_LMTACT1;
_LMTSCL1;
_LMTWRK1;
_M_RACE;
_MINAC11;
_MINAC21;
_MRACE1;
_PA150R2;
_PA30021;
_PASTAE1;
_PA300R2;
_PACAT1;
_PAINDX1;
_PAREC1;
_PRACE1;
_RACE;
_RACE_G1;
_RACEG21;
_RACEGR3;
_VEGLT1;
ACTIN11_ ;
ACTIN21_ ;
CRACASC1;
CRACORG1;
METVL11_;
METVL21_ ;
MRACASC1;
MRACORG1;
PA1MIN_ ;
PA1VIGM_;
PAMIN11_;
PAMIN21_;
PAMISS1_ ;
PAVIG11_ ;
PAVIG21_ .

Section 1: Health Status

_RFHLTH *Calculated variable for adults with good or better health.* We derive RFHLTH from GENHLTH.

1	Good or Better Health	Respondents who reported having excellent, very good, or good health. (GENHLTH =1, 2, 3)
2	Fair or Poor Health	Respondents who reported having fair or poor health. (GENHLTH =4, 5)
9	Don't Know/ Not Sure Or Refused/ Missing	Respondents who reported they didn't know, refused to answer, or had missing responses for the general health status question. (GENHLTH =7, 9, missing)

SAS Code:

```
IF 4 LE GENHLTH LE 5 THEN _RFHLTH=2;
 ELSE IF 1 LE GENHLTH LE 3 THEN _RFHLTH=1;
 ELSE _RFHLTH=9;
```

Section 2: Healthy Days--Health-Related Quality of Life

There are no calculated variables for Section 2.

Section 3: Health Care Access

_HCVU651 *Calculated variable for respondents aged 18-64 who have any form of health care coverage.* We derive_HCVU651 from AGE and HLTHPLN1.

1	Have Health Care Coverage	Respondents who reported having health care coverage (18 <= AGE <= 64 and HLTHPLN1 = 1)
2	Do Not Have Health Care Coverage	Respondents who reported not having health care coverage (18 <= AGE <= 64 and HLTHPLN1 = 2)
9	Don't Know/ Not Sure, Refused Or Missing	Respondents who reported that they did not know, were not sure, refused to report or had missing responses for having health care coverage (18 <= AGE <= 64 and HLTHPLN1 = 7, 9, or missing or AGE => 65)

SAS Code:

```
IF 18 LE AGE LE 64 THEN DO;
 IF HLTHPLN1=1 THEN _HCVU651=1;
 ELSE IF HLTHPLN1=2 THEN _HCVU651=2;
 ELSE _HCVU651=9;
 END;
 ELSE _HCVU651 = 9;
```

Section 4: Inadequate Sleep

There are no calculated variables for Section 4.

Section 5: Hypertension Awareness

_RFHYPE5 *Calculated variable for adults who have been told they have high blood pressure by a doctor, nurse, or other health professional.* We derive _RFHYPE5 from BPHIGH4.

1	No	Respondents who were not told their pressure is high by a health professional (BPHIGH4=2,3,or 4)
2	Yes	Respondents who were told their pressure is high by a health professional (BPHIGH4=1)
9	Don't Know/ Not Sure/ Refused/ Missing	Respondents who reported they didn´t know if they were told if their blood pressure is high, those who refused to answer if they were told if their blood pressure is high, and those with missing responses (BPHIGH4=7,9,or missing)

SAS Code:

```
IF BPHIGH4 = 1 THEN _RFHYPE5=2;
 ELSE IF BPHIGH4 = 2 THEN _RFHYPE5=1;
 ELSE IF BPHIGH4 = 3 THEN _RFHYPE5=1;
 ELSE IF BPHIGH4 = 4 THEN _RFHYPE5=1;
 ELSE IF BPHIGH4 IN (.,7,9) THEN _RFHYPE5=9 ;
```

Section 6: Cholesterol Awareness

_CHOLCHK *Calculated variable for cholesterol check within past five years.* We derive _CHOLCHK from BLOODCHO and CHOLCHK.

1	Had Cholesterol Checked In Past 5 Years	Respondents who reported having had their cholesterol checked within the past five years (BLOODCHO=1 and CHOLCHK=1,2,or 3)
2	Did Not Have Cholesterol Checked In Past 5 Years	Respondents who reported not having had their cholesterol checked within the past five years (BLOODCHO=1 and CHOLCHK=4)
3	Have Never Had Cholesterol Checked	Respondents who reported never having had their cholesterol checked (BLOODCHO=2)
9	Don't Know/ Not Sure Or Refused/ Missing	Respondents who reported they didn´t know if they had their cholesterol checked by a health professional, those who refused to answer if they had their cholesterol checked by a health professional, and those with missing responses (BLOODCHO=7,9,or missing and CHOLCHK=7,9,or missing)

SAS Code:

```
IF BLOODCHO=1 AND (1 LE CHOLCHK LE 3) THEN _CHOLCHK=1;
 ELSE IF BLOODCHO=1 AND CHOLCHK=4 THEN _CHOLCHK=2;
 ELSE IF BLOODCHO=2 AND CHOLCHK=. THEN _CHOLCHK=3;
 ELSE IF BLOODCHO IN (.,7,9) OR CHOLCHK IN (.,7,9) THEN _CHOLCHK=9;
```

Section 6: Cholesterol Awareness

_RFCHOL *Calculated variable for adults who have had their cholesterol checked and have been told by a doctor, nurse, or other health professional that it was high.* We derive _RFCHOL from BLOODCHO and TOLDHI2.

1	No	Respondents who reported having had their blood cholesterol checked but had not been told it was high (BLOODCHO=1 and TOLDHI2=2)
2	Yes	Respondents who reported having had their blood cholesterol checked and had been told that they have high blood cholesterol (BLOODCHO=1 and TOLDHI2=1)
9	Don't Know/ Not Sure Or Refused /Missing	Respondents who reported they did not know if they had their blood cholesterol checked, those that reported they didn´t know if they have been told their blood cholesterol was high, those who refused to answer if they had their blood cholesterol checked, those who refused to answer if they had been told that their blood cholesterol was high, and those with missing responses (BLOODCHO=1 and TOLDHI2=7,9,or missing)
.	Missing	Respondents who reported they have not had their blood cholesterol checked (BLOODCHO=2,7,9,or missing)

SAS Code:

```
IF BLOODCHO=1 AND TOLDHI2=1 THEN _RFCHOL=2;
 ELSE IF BLOODCHO=1 AND TOLDHI2=2 THEN _RFCHOL=1;
 ELSE IF BLOODCHO=1 AND TOLDHI2 IN (.,7,9) THEN _RFCHOL=9;
 ELSE _RFCHOL=.;
```

Section 7: Chronic Health Conditions

_LTASTH1 *Calculated variable for adults who have ever been told they have asthma.* We derive_LTASTH1 from ASTHMA3.

1	No	Respondents who have not been told by a doctor, nurse, or health professional that they had asthma. (ASTHMA3=2)
2	Yes	Respondents who have been told by a doctor, nurse, or health professional that they had asthma. (ASTHMA3=1)
9	Don't Know/ Not Sure Or Refused/Missing	Respondents who reported they did not know if they had been told by a doctor, nurse or health professional that they had asthma; those who refused to answer if they had been told by a doctor, nurse or health professional that they had asthma; or those with missing responses. (ASTHMA3=7, 9, missing)

SAS Code:

```
IF ASTHMA3=1 THEN _LTASTH1=2;
 ELSE IF ASTHMA3=2 THEN _LTASTH1=1;
 ELSE _LTASTH1=9;
```

Section 7: Chronic Health Conditions

_CASTHM1 *Calculated variable for adults who have been told they currently have asthma.* We derive _CASTHM1 from ASTHMA3 and ASTHNOW.

1	No	Respondents who have not been told by a doctor, nurse, or health professional that they had asthma or do not still have asthma. (ASTHMA3=2 or ASTHMA3=1 and ASTHNOW=2)
2	Yes	Respondents who have been told by a doctor, nurse, or health professional that they had asthma and that they still have asthma. (ASTHMA3=1 and ASTHNOW=1)
9	Don't know/ Not Sure Or Refused/Missing	Respondents who reported they did not know if they had been told by a doctor, nurse or health professional that they had asthma; those who refused to answer if they had been told by a doctor, nurse, or health professional that they had asthma; those who did not know if they still had asthma; those who refused to answer if they still had asthma; or those with missing responses. (ASTHMA3=7, 9, missing; or ASTHNOW=7, 9, missing)

SAS Code:

```
IF ASTHMA3=2 THEN _CASTHM1=1;
 ELSE IF ASTHMA3=1 AND ASTHNOW=1 THEN _CASTHM1=2;
 ELSE IF ASTHMA3=1 AND ASTHNOW=2 THEN _CASTHM1=1;
 ELSE _CASTHM1=9;
```

Section 7: Chronic Health Conditions

_ASTHMS1 *Calculated variable for computed asthma status.* We derive_ASTHMS1 from ASTHMA3 and ASTHNOW.

1	Current	Respondents who have been told by a doctor, nurse, or health professional that they had asthma and that they still have asthma. (ASTHMA3=1and ASTHNOW=1)
2	Former	Respondents who have been told by a doctor, nurse, or health professional that they had asthma but do not still have asthma. (ASTHMA3=1 and ASTHNOW=2)
3	Never	Respondents who have not been told by a doctor, nurse, or health professional that they had asthma. (ASTHMA3=2)
9	Don't Know/ Not Sure Or Refused/ Missing	Respondents who reported they didn't know if they had been told by a doctor, nurse, or health professional that they had asthma;, those who refused to answer if they had been told by a doctor, nurse or health professional that they had asthma; those who didn't know if they still had asthma; those that refused to answer if they still had asthma;, or those with missing responses. (ASTHMA3=7, 9, missing; or ASTHNOW=7, 9, missing)

SAS Code:

```
IF ASTHMA3=1 AND ASTHNOW=1 THEN _ASTHMS1=1;
 ELSE IF ASTHMA3=1 AND ASTHNOW=2 THEN _ASTHMS1=2;
 ELSE IF ASTHMA3=2 THEN _ASTHMS1=3;
 ELSE _ASTHMS1=9;
```

Section 7: Chronic Health Conditions

_DRDXAR1 *Calculated variable for respondents who have had a doctor diagnose them as having some form of arthritis.* We derive_DRDXAR1 from HAVARTH3.

1	Diagnosed with Arthritis	Respondents who have been told by a doctor they had arthritis (HAVARTH2=1)
2	Not Diagnosed with Arthritis	Respondents who have not been told by a doctor they had arthritis (HAVARTH2=2)
.	Don´t Know/ Not Sure/ Refused/ Missing	Respondents who reported they didn´t know if they had been told by a doctor they had arthritis, those who refused to answer if they had been told by a doctor they had arthritis, and those with missing responses (HAVARTH2=7,9, or missing)

SAS Code:

```
IF HAVARTH3 = 1 THEN _DRDXAR1=1;
 ELSE IF HAVARTH3 = 2 THEN _DRDXAR1=2;
 ELSE IF HAVARTH3 IN (7,9,.) THEN _DRDXAR1=.;
```

Section 8: Demographics

MRACORG1 *Calculated variable for mrace1 with 77,80,88,90s removed.* We derive MRACORG1 from MRACE1 in the original order in which the data were received from the state territory. If MRACE1 is greater than 99, then any 77, 80, 88, or 99 is removed. If MRACE1 is less than or equal to 99, then MRACORG1 is equal to MRACE1.

10 - 605040 302010	Race code(s)	Respondents reported race or races in original order (MRACE1=10, 20, 30, 40, 50, 60, or MRACE1 > 99)
77	Don’t Know/ Not Sure	Respondents who reported they did not know or who were unsure of their race. (MRACE1=77)
99	Refused	Respondents who refused to give their race. (MRACE1=99)

SAS Code:

```
IF (LEFT(COMPRESS(LENGTH(MRACE1)))) > 2 THEN DO;
MRACORG77=PUT(LEFT(COMPRESS(TRANWRD(MRACE1,"77",""))),28.);
MRACORG88=PUT(LEFT(COMPRESS(TRANWRD(MRACORG77,"88",""))),28.);
MRACORG99=PUT(LEFT(COMPRESS(TRANWRD(MRACORG88,"99",""))),28.);
MRACORG1=PUT(LEFT(COMPRESS(TRANWRD(MRACORG99,"80",""))),28.);
END;
ELSE DO;
MRACORG1=MRACE1;
END;
```

Section 8: Demographics

MRACASC1 *Calculated variable for mrace with 7,8,9s removed, in ascending order*. We derive MRACASC1 from MRACORG1 and sort the values that make up MRACORG1 from smallest to largest.

10 - 102030 405060	Race code(s)	Respondents reported race or races in ascending order (MRACE1=10, 20, 30, 40, 50, 60, or MRACORG1 > 99)
77	Don't Know/ Not Sure	Respondents who reported they did not know or were unsure of their race. (MRACORG1=77)
99	Refused	Respondents who refused to give their race. (MRACORG1=99)

Section 8: Demographics

MRACASC1 *Calculated variable for mrace with 7,8,9s removed, in ascending order.* We derive MRACASC1 from MRACORG1 and sort the values that make up MRACORG1 from smallest to largest.

SAS Code:

```
IF (LEFT(COMPRESS(LENGTH(MRACORG1)))) > 2 THEN DO;
array pairs[14];
length MRAC_SORTED $28;
counter = .;
do pos = 1 to length(MRACORG1) by 2;
counter + 1;
pairs[counter] = input(substr(MRACORG1, pos, 2), 2.);
end;
do i = 1 to counter;
MRAC_SORTED = cats(MRAC_SORTED, smallest(i, of pairs[*]));
end;
drop pairs: i counter pos;
MRAC_VALID=MRAC_SORTED;
%macro swapthis;
%do M = 1 %to 14;
%LET R=%eval((&M.*2)-1);
%do s = 41 %to 47;
if substr(MRAC_VALID,&R.,2)=&s. then do;
MRAC_VALID = TRANWRD(MRAC_VALID,"&S.","40");
end;
%end;
%do t = 51 %to 54;
if substr(MRAC_VALID,&R.,2)=&t. then do;
MRAC_VALID = TRANWRD(MRAC_VALID,"&T.","50");
end;
%end;
%end;
%mend;
%swapthis;
DO Z=1 TO 4;
MRAC_5050=
PUT(LEFT(COMPRESS(TRANWRD(MRAC_VALID,"5050","50XX"))),28.);
MRAC_ONE50= PUT(LEFT(COMPRESS(TRANWRD(MRAC_5050,"XX",""))),28.);
END;
MRAC_ONE40=MRAC_ONE50;
DO Y=1 TO 7;
MRAC_4040=
PUT(LEFT(COMPRESS(TRANWRD(MRAC_ONE40,"4040","40XX"))),28.);
MRAC_ONE40= PUT(LEFT(COMPRESS(TRANWRD(MRAC_4040,"XX",""))),28.);
END;
MRACASC1=INPUT(MRAC_ONE40,28.0);
END;
ELSE DO;
MRACASC1=INPUT(MRACORG1,28.0);
END;
```

Section 8: Demographics

_PRACE1 *Calculated variable for preferred race category.* We derive _PRACE from MRACASC1 and ORACE3. If MRACEASC has only one response, then _PRACE1=MRACASC1. If MRACASC1 has more than one response, then _PRACE1=ORACE3.

1	White	Respondents who reported their race as white. (MRACASC1=10 or MRACASC1>99 and ORACE3=10)
2	Black Or African American	Respondents who reported their race as black. (MRACASC1=22 or MRACASC1>99 and ORACE3=20)
3	American Indian Or Alaskan Native	Respondents who reported their race as American Indian or Alaskan Native. (MRACASC1=30 or MRACASC1>99 and ORACE3=30)
4	Asian	Respondents who reported their race as Asian. (MRACASC1=40 or MRACASC1>99 and ORACE3=40)
5	Native Hawaiian Or Other Pacific Islander	Respondents who reported their race as Native Hawaiian or Pacific Islander. (MRACASC1=50 or MRACASC1>99 and ORACE3=50)
6	Other Race	Respondents who report they are of some other race group not listed in the question responses. (MRACASC1=60 or MRACASC1>99 and ORACE3=60)
7	No Preferred Race	Respondents who reported they are of more than one race group but did not report a preference or the preferred race is missing (MRACASC1>99 and ORACE3=77 or 99)
8	Multiracial But Preferred Race Not Answered	Respondents who reported they are of more than one race group but did not answer the question about which race best represents them. NOTE: This is a data collection error. (MRACASC1 >99 and ORACE3=80 or MRACASC1 >99 and ORACE3= Missing)
77	Don't Know/ Not Sure	Respondents who reported they did not know their race and did not answer the question about which race best represents them. (MRACASC1=77)
99	Refused	Respondents who refused to give their race and did not answer the question about which race best represents them. (MRACASC1=99)

SAS Code:

```
IF MRACASC1 EQ 10 THEN _PRACE1 = 1;
ELSE IF MRACASC1 EQ 20 THEN _PRACE1 = 2;
ELSE IF MRACASC1 EQ 30 THEN _PRACE1 = 3;
ELSE IF 40 LE MRACASC1 LE 49 THEN _PRACE1=4;
ELSE IF 50 LE MRACASC1 LE 59 THEN _PRACE1=5;
ELSE IF MRACASC1 EQ 60 THEN _PRACE1=6;
ELSE IF MRACASC1 EQ 77 THEN _PRACE1=77;
ELSE IF MRACASC1 EQ 99 THEN _PRACE1=99;
ELSE IF MRACASC1 GT 99 THEN DO;
 IF ORACE3=77 THEN _PRACE1=7;
ELSE IF ORACE3=99 THEN _PRACE1=7;
ELSE IF ORACE3=.  THEN _PRACE1=8;
ELSE IF ORACE3=80 THEN _PRACE1=8;
ELSE IF ORACE3 EQ 10 THEN _PRACE1=1;
ELSE IF ORACE3 EQ 20 THEN _PRACE1=2;
ELSE IF ORACE3 EQ 30 THEN _PRACE1=3;
ELSE IF 40 LE ORACE3 LE 49 THEN _PRACE1=4;
ELSE IF 50 LE ORACE3 LE 59 THEN _PRACE1=5;
ELSE IF ORACE3 EQ 60 THEN _PRACE1=6;
END;
```

Section 8: Demographics

_MRACE1 *Calculated variable for calculated multiracial race categorization.* We derive _MRACE1 from MRACASC1. If respondents reported more than one race, they are assigned to the multiracial category. If MRACASC1 is less than 40 or equal to 60 then _MRACE1=MRACASC1. If MRACASC1 is 40-47 then _MRACE1=40. If MRACASC1 is 50-54 then _MRACE1=50.

1	White Only	Respondents who reported they are white. (MRACASC1=10)
2	Black Or African American Only	Respondents who report they are black. (MRACASC1=22)
3	American Indian Or Alaskan Native Only	Respondents who reported they are American Indian or Alaskan Native. (MRACASC1=30)
4	Asian Only	Respondents who reported they are Asian. (MRACASC1=40,41,42,423,44,45,46,47)
5	Native Hawaiian Or Other Pacific Islander Only	Respondents who reported they are native Hawaiian or Pacific Islander. (MRACASC1=50,51,52,53,54)
6	Other Race Only	Respondents who reported they are of some other race group not listed in the question responses. (MRACASC1=60)
7	Multiracial	Respondents who reported they are of more than one race group (MRACASC1>99)
77	Don't Know/ Not Sure	Respondents who reported they did not know their race. (MRACASC1=77)
99	Refused	Respondents who refused to give their race information. (MRACASC1=99)

SAS Code:

```
IF MRACASC1 GT 99 THEN _MRACE1 = 7;
 ELSE IF MRACASC1 EQ 99 THEN _MRACE1 = 99;
 ELSE IF MRACASC1 EQ 77 THEN _MRACE1 = 77;
 ELSE IF MRACASC1 EQ 10 THEN _MRACE1 = 1;
 ELSE IF MRACASC1 EQ 20 THEN _MRACE1 = 2;
ELSE IF MRACASC1 EQ 30 THEN _MRACE1 = 3;
 ELSE IF 40 LE MRACASC1 LE 47 THEN _MRACE1 = 4;
ELSE IF 50 LE MRACASC1 LE 54 THEN _MRACE1 = 5;
ELSE IF MRACASC1=60 THEN _MRACE1=6;
```

Section 8: Demographics

_M_RACE *Calculated variable for calculated multiracial race categorization.* We derive _M_RACE from MRACASC1. If respondents reported more than one race, they are assigned to the multiracial category. Otherwise _M_RACE=MRACASC1.

10	White	Respondents who reported being white (MRACASC1=10)
20	Black Or African American	Respondents who reported being black or African American (MRACASC1=22)
30	American Indian Or Alaskan Native	Respondents who reported being American Indian or Alaskan Native (MRACASC1=30)
40	Asian	Respondents who reported being Asian (MRACASC1=40)
41	Asian Indian	Respondents who reported being Asian Indian (MRACASC1=41)
42	Chinese	Respondents who reported being Chinese (MRACASC1=42)
43	Filipino	Respondents who reported being Filipino (MRACASC1=43)
44	Japanese	Respondents who reported being Japanese (MRACASC1=44)
45	Korean	Respondents who reported being Korean (MRACASC1=45)
46	Vietnamese	Respondents who reported being Vietnamese (MRACASC1=46)
47	Other Asian	Respondents who reported being Other Asian (MRACASC1=47)
50	Pacific Islander	Respondents who reported being Pacific Islander (MRACASC1=50)
51	Native Hawaiian	Respondents who reported being Native Hawaiian (MRACASC1=51)
52	Guamanian Or Chamorro	Respondents who reported being Guamanian or Chamorro (MRACASC1=52)
53	Samoan	Respondents who reported being Samoan (MRACASC1=53)
54	Other Pacific Islander	Respondents who reported being Other Pacific Islander (MRACASC1=54)
60	Other	Respondents who reported being Other (MRACASC1=60)
70	Multiple Responses	Respondents who reported being of multiple races/ethnicities (MRACASC1>99)
77	Don't Know/ Not Sure	Respondents who reported they did not know their race (MRACASC1=77)
99	Refused	Respondents who refused to answer what race/ethnicity they were (MRACASC1=99)

SAS Code:

```
IF MRACASC1 GT 99 THEN _M_RACE = 70;
ELSE IF MRACASC1 EQ 99 THEN _M_RACE = 99;
ELSE IF MRACASC1 EQ 77 THEN _M_RACE = 77;
ELSE IF 10 LE MRACASC1 LE 60 THEN _M_RACE=MRACASC1;
```

Section 8: Demographics

_HISPANC *Calculated variable for Hispanic, Latino/a, or Spanish origin calculated variable.* We derive _HISPANC from HISPANC3

1	Hispanic, Latino/A, Or Spanish Origin	Respondents who reported being of Hispanic, Latino/a, or Spanish origin (HISPANC3=1,2,3,4 or HISPANC3 > 9)
2	Not Of Hispanic, Latino/A, Or Spanish Origin	Respondents who reported they were not of Hispanic, Latino/a, or Spanish origin (HISPANC3=5)
9	Don´t Know, Refused Or Missing	Respondents who refused to report if they were of Hispanic, Latino/a, or Spanish origin (HISPANC3=7)
.	Not Asked Or Missing	Respondents who reported they did not know if they were of Hispanic, Latino/a, or Spanish origin (HISPANC3=9)

SAS Code:

```
IF HISPANC3 in (5,58) THEN _HISPANC=2;
ELSE IF HISPANC3 in (7,9,.) THEN _HISPANC=9;
ELSE _HISPANC=1;
```

Section 8: Demographics

_RACE *Calculated variable for race ethnicity categories.* We derive _RACE from _MRACE1 and _HISPANC. All respondents who reported they are of Hispanic or Latino origin are coded as Hispanic.

1	White Only, Non-Hispanic	Respondents who reported they are white and not of Hispanic origin. (_MRACE1=1 and _HISPANC=2)
2	Black Only, Non-Hispanic	Respondents who reported they are black and not of Hispanic origin. (_MRACE1=2 and _HISPANC=2)
3	American Indian Or Alaskan Native Only, Non-Hispanic	Respondents who reported they are American Indian or Alaskan Native and not of Hispanic origin. (_MRACE1=3 and _HISPANC=2)
4	Asian Only, Non-Hispanic	Respondents who reported they are Asian and not of Hispanic origin. (_MRACE1=4 and _HISPANC=2)
5	Native Hawaiian Or Other Pacific Islander Only, Non-Hispanic	Respondents who reported they are Native Hawaiian or Pacific Islander and not of Hispanic origin. (_MRACE1=5 and _HISPANC=2)
6	Other Race Only, Non-Hispanic	Respondents who reported they are of some other race group not listed in the question responses and are not of Hispanic origin. (_MRACE1=6 and _HISPANC=2)
7	Multiracial, Non-Hispanic	Respondents who reported they are of more than one race group and are not of Hispanic origin. (_MRACE1=7 and _HISPANC=2)
8	Hispanic	Respondents who reported they are of Hispanic origin. (_HISPANC=1)
9	Don't Know/ Not Sure/ Refused	Respondents who reported they did not know, or refused to give their race and are not of Hispanic origin or did not know, or refused to answer if they are of Hispanic origin. (_MRACE1 =77, 99 and _HISPANC=2 or _HISPANC=7, 9)

SAS Code:

```
IF _HISPANC=9 OR (_MRACE1 IN(77,99) AND HISPANC3 EQ 2) THEN DO;
_RACE = 9 ;
END;
ELSE IF _HISPANC =2 THEN DO;
IF _MRACE1 = 1 THEN _RACE = 1 ;
ELSE IF _MRACE1 = 2 THEN _RACE = 2 ;
ELSE IF _MRACE1 = 3 THEN _RACE = 3 ;
ELSE IF _MRACE1 = 4 THEN _RACE = 4 ;
ELSE IF _MRACE1 = 5 THEN _RACE = 5 ;
ELSE IF _MRACE1 = 6 THEN _RACE = 6 ;
ELSE IF _MRACE1 = 7 THEN _RACE = 7 ;
END;
ELSE IF _HISPANC=1 THEN DO;
_RACE = 8 ;
END;
```

Section 8: Demographics

_RACEG21 *Calculated variable for white Non-Hispanic race group.* We derive _RACEG21 from _RACE.

1	Non-Hispanic White	Respondents who reported they are white and not of Hispanic origin. (_RACE=1)
2	Non-White Or Hispanic	Respondents who reported they are non-white or of Hispanic origin. (_RACE=2, 3, 4, 5, 6, 7, 8)
9	Don't Know/ Not Sure/ Refused	Respondents who reported they did not know, or refused to give their race and are not of Hispanic origin or did not know, or refused to answer if they are of Hispanic origin. (_RACE=9)

SAS Code:

```
IF _RACE = 1 THEN _RACEG21 = 1;
 ELSE IF _RACE IN (2,3,4,5,6,7,8) THEN _RACEG21 = 2;
 ELSE IF _RACE=9 THEN _RACEG21 = 9;
```

Section 8: Demographics

_RACEGR3 *Calculated variable for five-level race ethnicity category.* We derive _RACEGR3 derived from _RACE.

1	White Only, Non-Hispanic	Respondents who reported they are white and not of Hispanic origin. (_RACE=1)
2	Black Only, Non-Hispanic	Respondents who reported they are black and not of Hispanic origin. (_RACE=2)
3	Other Race Only, Non-Hispanic	Respondents who reported they are not white and not black and not of Hispanic origin. (_RACE=3, 4, 5, 6)
4	Multiracial, Non-Hispanic	Respondents who reported being multiracial but not of Hispanic origin. (_RACE=7)
5	Hispanic	Respondents who reported they are of Hispanic origin. (_RACE=8)
9	Don't Know/ Not Sure/ Refused	Respondents who reported they did not know, or refused to give their race and are not of Hispanic origin or did not know, or refused to answer if they are of Hispanic origin. (_RACE=9)

SAS Code:

```
IF _RACE=1 THEN _RACEGR3=1;
 ELSE IF _RACE=2 THEN _RACEGR3=2;
 ELSE IF 3 LE _RACE LE 6 THEN _RACEGR3=3;
 ELSE IF _RACE=7 THEN _RACEGR3=4;
 ELSE IF _RACE=8 THEN _RACEGR3=5;
 ELSE IF _RACE=9 THEN _RACEGR3=9;
```

Section 8: Demographics

_RACE_G1 *Calculated variable for race groups used for internet prevalence tables.* We derive _RACE_G from _RACEGR3.

1	White - Non-Hispanic	Respondents who reported they are white and not of Hispanic origin. (_RACEGR3=1)
2	Black - Non-Hispanic	Respondents who reported they are black and not of Hispanic origin. (_RACEGR3=2)
3	Hispanic	Respondents who reported that they are of Hispanic origin. (_RACEGR3=5)
4	Other race only, Non-Hispanic	All other respondents with valid race responses except for those reporting multiracial or Hispanic origins. (_RACEGR3=3)
5	Multiracial, Non-Hispanic	All other respondents reporting multiracial but non-Hispanic origin. (_RACEGR3=4)
.	Don't know/ Not sure/ Refused component question	Respondents with don´t know, refused or missing values for _RACEGR2. (_RACEGR3=9, missing)

SAS Code:

```
IF _RACEGR3 = 1 THEN _RACE_G1 = 1;
 ELSE IF _RACEGR3 = 2 THEN _RACE_G1 = 2;
 ELSE IF _RACEGR3 = 3 THEN _RACE_G1 = 4;
 ELSE IF _RACEGR3 = 4 THEN _RACE_G1 = 5;
 ELSE IF _RACEGR3 = 5 THEN _RACE_G1 = 3;
```

Section 8: Demographics

_AGEG5YR *Calculated variable for fourteen-level age category.* We derive_AGEG5YR from AGE.

1	Age 18 to 24	Respondents with reported age from 18 to 24 years (18 <= AGE <= 24)
2	Age 25 to 29	Respondents with reported age from 25 to 29 years (25 <= AGE <= 29)
3	Age 30 to 34	Respondents with reported age from 30 to 34 years (30 <= AGE <= 34)
4	Age 35 to 39	Respondents with reported age from 35 to 39 years (35 <= AGE <= 39)
5	Age 40 to 44	Respondents with reported age from 40 to 44 years (40 <= AGE <= 44)
6	Age 45 to 49	Respondents with reported age from 45 to 49 years (45 <= AGE <= 49)
7	Age 50 to 54	Respondents with reported age from 50 to 54 years (50 <= AGE <= 54)
8	Age 55 to 59	Respondents with reported age from 55 to59 years (55 <= AGE <= 59)
9	Age 60 to 64	Respondents with reported age from 60 to 64 years (60 <= AGE <= 64)
10	Age 65 to 69	Respondents with reported age from 65 to 69 years (65 <= AGE <= 69)
11	Age 70 to 74	Respondents with reported age from 70 to 74 years (70 <= AGE <= 74)
12	Age 75 to 79	Respondents with reported age from 75 to 79 years (75 <= AGE <= 79)
13	Age 80 or older	Respondents with reported age from 80 to 99 years (80 <= AGE <= 99)
14	Don’t know/ Refused/Missing	Respondents which reported they did not know, were unsure, refused to report or had missing responses for their age. (AGE=7, 9, missing)

Section 8: Demographics

_AGEG5YR *Calculated variable for fourteen-level age category.* We derive_AGEG5YR from AGE.

SAS Code:

```
IF 18 LE AGE LE 24 THEN _AGEG5YR = 1;
 ELSE IF 25 LE AGE LE 29 THEN _AGEG5YR = 2;
 ELSE IF 30 LE AGE LE 34 THEN _AGEG5YR = 3;
 ELSE IF 35 LE AGE LE 39 THEN _AGEG5YR = 4;
 ELSE IF 40 LE AGE LE 44 THEN _AGEG5YR = 5;
ELSE IF 45 LE AGE LE 49 THEN _AGEG5YR = 6;
 ELSE IF 50 LE AGE LE 54 THEN _AGEG5YR = 7;
 ELSE IF 55 LE AGE LE 59 THEN _AGEG5YR = 8;
 ELSE IF 60 LE AGE LE 64 THEN _AGEG5YR = 9;
 ELSE IF 65 LE AGE LE 69 THEN _AGEG5YR = 10;
ELSE IF 70 LE AGE LE 74 THEN _AGEG5YR = 11;
 ELSE IF 75 LE AGE LE 79 THEN _AGEG5YR = 12;
 ELSE IF 80 LE AGE LE 99 THEN _AGEG5YR = 13;
 ELSE _AGEG5YR = 14;
```

Section 8: Demographics

_AGE65YR *Calculated variable for two-level age category*. We derive_AGE65YR from AGE.

1	Age 18 To 64	Respondents with reported ages 18–64. (18 <= AGE <=64)
2	Age 65 Or Older	Respondents with reported ages 65–99. (65 >= AGE >= 99)
3	Don't Know/ Refused/ Missing	Respondents which reported they did not know, were not sure, refused, or had a missing value for AGE. (AGE=7,9,or missing)

SAS Code:

```
IF 18 LE AGE LE 64 THEN _AGE65YR=1;
 ELSE IF 65 LE AGE LE 99 THEN _AGE65YR=2;
 ELSE _AGE65YR = 3;
```

Section 8: Demographics

_AGE_G *Calculated variable for six-level imputed age category*. We derive _AGE_G from _IMPAGE (imputed age).

1	Age 18 to 24	Respondents with imputed ages 18–24 years of age. (18 <= _IMPAGE <= 24)
2	Age 25 to 34	Respondents with imputed ages 25–34 years of age. (25 <= _IMPAGE <= 34)
3	Age 35 to 44	Respondents with imputed ages 35–44 years of age. (35 <= _IMPAGE <= 44)
4	Age 45 to 54	Respondents with imputed ages 45–54 years of age. (45 <= _IMPAGE <= 54)
5	Age 55 to 64	Respondents with imputed ages 55–64 years of age. (55 <= _IMPAGE <= 64)
6	Age 65 or older	Respondents with imputed ages 65–99 years of age. (_IMPAGE => 65)

SAS Code:

```
IF (18<=_IMPAGE<=24) THEN _AGE_G = 1;
 ELSE IF (25<=_IMPAGE<=34) THEN _AGE_G = 2;
 ELSE IF (35<=_IMPAGE<=44) THEN _AGE_G = 3;
 ELSE IF (45<=_IMPAGE<=54) THEN _AGE_G = 4;
 ELSE IF (55<=_IMPAGE<=64) THEN _AGE_G = 5;
 ELSE IF (_IMPAGE >= 65) THEN _AGE_G = 6;
```

Section 8: Demographics

HTIN4 *Calculated variable for reported height in inches.* We derive HTIN4 from HEIGHT2 and calculate it by adding the foot portion of HEIGHT2 multiplied by 12, to the inch portion.

36 - 95	Height In Inches	Respondents calculated height in inches. (HTIN4=(height in feet x 12) + height in inches)
999	Don't Know/ Refused/Missing	Respondents who reported they did not know, were not sure, refused to report or had missing responses for their height. (HEIGHT3=777, 999, 7777, 9999 or missing or HEIGHT3 < 36 inches or HEIGHT3 > 95 inches)

SAS Code:

```
IF 300<=HEIGHT3<=311 THEN HTIN4=((HEIGHT3-300)+36);
ELSE IF 400<=HEIGHT3<=411 THEN HTIN4=((HEIGHT3-400)+48);
ELSE IF 500<=HEIGHT3<=511 THEN HTIN4=((HEIGHT3-500)+60);
ELSE IF 600<=HEIGHT3<=611 THEN HTIN4=((HEIGHT3-600)+72);
ELSE IF 700<=HEIGHT3<=711 THEN HTIN4=((HEIGHT3-700)+84);
```

Section 8: Demographics

HTM4 *Calculated variable for reported height in meters.* We derive HTM4 from the variable HTIN4 by multiplying HTIN4 by 2.54 cm per in and dividing by 100 cm per meter. HTM4 is derived from HEIGHT2 metric values by dividing by 100.

91 - 244	Height in meters [2 implied decimal places]	Respondents reported or calculated height in meters. (HTM4=HTIN4 x 0.0254 or HTM4 = (HEIGHT3 - 9000) ÷ 100)
999	Don't know/ Refused/ Missing	Respondents who reported they did not know, were not sure, refused to report or had missing responses for their height. (HEIGHT3=777, 999, 7777, 9999 or missing or HEIGHT3 < 0.91 meters or HEIGHT3 2.44 meters)

SAS Code:

```
IF 300 <= HEIGHT3 <= 711 THEN HTM4=HTIN4*0.0254;
ELSE IF 9091 <= HEIGHT3 < 9244 THEN HTM4=(HEIGHT3-9000)/100;
```

Section 8: Demographics

WTKG3 *Calculated variable for reported weight in kilograms.* We derive WTKG3 from WEIGHT2 by multiplying WEIGHT2 by 0.4535924 kg per lb.

2300 - 29500	Weight in kilograms [2 implied decimal places]	Respondents reported or calculated weight in kilograms.
99999	Don't know/ Refused/Missing	Respondents who reported they did not know, were not sure, refused to report or had missing responses for their weight.

SAS Code:

```
** CONVERSION FACTOR = 0.4535924 kg/lb **;
 IF WEIGHT2 NOT IN (777,999,7777,9999,.) THEN DO;
 IF 0050 LE WEIGHT2 < 0650 THEN WTKG3=WEIGHT2*0.4535924;
 ELSE IF 9023 LE WEIGHT2 < 9295 THEN WTKG3=WEIGHT2-9000;
END;
```

Section 8: Demographics

_BMI5 *Calculated variable for body mass index (bmi).* We derive _BMI5 from WTKG3 and HTM4 by dividing WTKG3 by HTM4^2.

1 - 9999	1 Or Greater	Respondents calculated body mass index (BMI) {units=kilograms per meter squared}. (_BMI5 = WTKG3 / (HTM4xHTM4))
.	Don't Know/ Refused/Missing	Respondents who had a missing value for their height in meters or weight in kilograms. (WTKG3=missing or HTM4=missing or _BMI5<12.00 or _BMI5>=100 or PREGNANT=1)

SAS Code:

```
IF (WTKG3 NOTIN (.)) AND (HTM4 NOTIN (.)) THEN _BMI5=WTKG3/(HTM4 **
2);
 ELSE _BMI5=.;
IF _BMI5 NE . THEN _BMI5=ROUND(_BMI5,.01);
 IF _BMI5 > 99.99 THEN _BMI5=.;
 IF _BMI5 < 12.00 THEN _BMI5=.;
IF PREGNANT=1 THEN _BMI5=.;
```

Section 8: Demographics

_BMI5CAT *Calculated variable for four-categories of body mass index (bmi).* We derive _BMI5CAT from _BMI5.

1	Underweight	Respondents classified as underweight based on body mass index. (_BMI5 < 18.50)
2	Normal Weight	Respondents classified as normal weight based on body mass index. (18.50 <= _BMI5 < 25.00)
3	Overweight	Respondents classified as overweight based on body mass index. (25.00 <= _BMI5 < 30.00)
4	Obese	Respondents classified as obese based on body mass index. (30.00 <= _BMI5 < 99.99)
.	Don't Know/ Refused/Missing	Respondents with an unknown, refused, or missing value for body mass index. (_BMI5=.)

SAS Code:

```
IF (0.00 LE _BMI5 < 18.50) THEN _BMI5CAT=1;
 ELSE IF (18.50 LE _BMI5 < 25.00) THEN _BMI5CAT=2;
 ELSE IF (25.00 LE _BMI5 < 30.00) THEN _BMI5CAT=3;
ELSE IF _BMI5 GE 30.00 THEN _BMI5CAT=4;
```

Section 8: Demographics

_RFBMI5 *Calculated variable for adults who have a body mass index greater than 25.00 (overweight or obese).* We derive_RFBMI5 from _BMI5.

1	No	Respondents not classified as overweight or obese based on body mass index. (12 <= _BMI5 < 25.00)
2	Yes	Respondents classified as overweight or obese based on body mass index. (25.00 <= _BMI5 <= 99.99)
9	Don't know/ Refused/Missing	Respondents with an unknown, refused, or missing value for body mass index. (_BMI5=missing)

SAS Code:

```
IF (12.00 LE _BMI5 < 25.00) THEN _RFBMI5=1;
 ELSE IF (25.00 <=  _BMI5 < 99.99) THEN _RFBMI5=2;
 ELSE _RFBMI5=9;
** Round off HTM4, WTKG3 and _BMI5 to 2 decimal places and remove the
decimal **;
 HTIN4 = round(HTIN4,1);
 HTM4 = round((HTM4*100),1);
 WTKG3 = round((WTKG3*100),1);
 IF _BMI5 NE . THEN _BMI5 = ROUND((_BMI5*100),1);
```

Section 8: Demographics

_CHLDCNT *Calculated variable for number of children in household.* We derive _CHLDCNT from CHILDREN.

1	No Children in Household	Respondents who reported having no children. (CHILDREN=88)
2	One Child In Household	Respondents who reported having one child. (CHILDREN=1)
3	Two Children in Household	Respondents who reported having two children. (CHILDREN=2)
4	Three Children in Household	Respondents who reported having three children. (CHILDREN=3)
5	Four Children in Household	Respondents who reported having four children. (CHILDREN=4)
6	Five or More Children in Household	Respondents who reported having five or more children. (5 <= CHILDREN < 87)
9	Don't Know/ Not Sure/ Missing	Respondents who reported they did not know, were not sure, refused or had a missing value for CHILDREN. (CHILDREN=99)

SAS Code:

```
IF CHILDREN = 88 THEN _CHLDCNT = 1;
 ELSE IF CHILDREN = 01 THEN _CHLDCNT = 2;
 ELSE IF CHILDREN = 02 THEN _CHLDCNT = 3;
 ELSE IF CHILDREN = 03 THEN _CHLDCNT = 4;
 ELSE IF CHILDREN = 04 THEN _CHLDCNT = 5;
ELSE IF 05 <= CHILDREN < 88 THEN _CHLDCNT = 6;
 ELSE IF CHILDREN = 99 THEN _CHLDCNT = 9;
 ELSE IF CHILDREN = . THEN _CHLDCNT = 9;
```

Section 8: Demographics

_EDUCAG *Calculated variable for level of education completed.* We derive _EDUCAG from EDUCA.

1	Did Not Graduate High School	Respondents who reported they did not graduate high school. (EDUCA=1,2,3)
2	Graduated High School	Respondents who reported they graduated high school. (EDUCA=4)
3	Attended College Or Technical School	Respondents who reported they attended college or technical school. (EDUCA=5)
4	Graduated From College Or Technical School	Respondents who reported they graduated from college or technical school. (EDUCA=6)
9	Don't Know/ Not Sure/ Missing	Respondents who reported they did not know, were not sure, refused, or had a missing value for EDUCA. (EDUCA=9, missing)

SAS Code:

```
IF EDUCA IN (1,2,3) THEN _EDUCAG = 1;
 ELSE IF EDUCA IN (4) THEN _EDUCAG = 2;
 ELSE IF EDUCA IN (5) THEN _EDUCAG = 3;
 ELSE IF EDUCA IN (6) THEN _EDUCAG = 4;
 ELSE IF EDUCA IN (.,9) THEN _EDUCAG = 9;
```

Section 8: Demographics

_INCOMG *Calculated variable for income categories.* We derive _INCOMG from INCOME2.

1	Less Than $15,000	Respondents whose reported income is less than $15,000. (INCOME2=1,2)
2	$15,000 To Less Than $25,000	Respondents whose reported income is $15,000 to less than $25,000. (INCOME2=3,4)
3	$25,000 To Less Than $35,000	Respondents whose reported income is $25,000 to less than $35,000. (INCOME2=5)
4	$35,000 To Less Than $50,000	Respondents whose reported income is $35,000 to less than $50,000. (INCOME2=6)
5	$50,000 Or More	Respondents whose reported income is $50,000 or more. (INCOME2=7,8)
9	Don't Know/ Not Sure/ Missing	Respondents who refused to answer, did not know or had a missing value for INCOME2. (INCOME2=77,99, or missing)

SAS Code:

```
IF INCOME2 IN (1,2) THEN _INCOMG = 1;
 ELSE IF INCOME2 IN (3,4) THEN _INCOMG = 2;
 ELSE IF INCOME2 IN (5) THEN _INCOMG = 3;
ELSE IF INCOME2 IN (6) THEN _INCOMG = 4;
 ELSE IF INCOME2 IN (7,8) THEN _INCOMG = 5;
 ELSE IF INCOME2 IN (77,99,.) THEN _INCOMG = 9;
```

Section 9: Tobacco Use

_SMOKER3 *Calculated variable for four-level smoker status: everyday smoker, someday smoker, former smoker, non-smoker*. We derive _SMOKER3 from SMOKE100 and SMOKDAY2.

1	Current Smoker-- Now Smokes Every Day	Respondents who reported having smoked at least 100 cigarettes in their lifetime and now smoke every day. (SMOKE100=1 and SMOKDAY2=1)
2	Current Smoker -- Now Smokes Some Days	Respondents who reported having smoked at least 100 cigarettes in their lifetime and now smoke some days. (SMOKE100=1 and SMOKDAY2=2)
3	Former Smoker	Respondents who reported having smoked at least 100 cigarettes in their lifetime and currently do not smoke. (SMOKE100=1 and SMOKDAY2=3)
4	Never Smoked	Respondents who reported they had not smoked at least 100 cigarettes in their lifetime. (SMOKE100=2)
9	Don't Know/ Refused/ Missing	Respondents who reported they didn't know if they had smoked 100 cigarettes in their lifetime; those who refused to answer if they had smoked 100 cigarettes in their lifetime; those who didn't know if they now smoked every day, some days or not at all; those who refused to answer if they now smoked every day, some days, or not at all; or those with missing responses. (SMOKE100=7, 9, missing; or SMOKDAY2=7, 9, missing)

SAS Code:

```
IF SMOKE100=2 THEN _SMOKER3=4;
 ELSE IF SMOKE100=1 THEN DO;
 IF SMOKDAY2=1 THEN _SMOKER3=1;
 ELSE IF SMOKDAY2=2 THEN _SMOKER3=2;
 ELSE IF SMOKDAY2 = 3 THEN _SMOKER3=3;
 ELSE _SMOKER3=9;
 END;
 ELSE _SMOKER3=9;
```

Section 9: Tobacco Use

_RFSMOK3 *Calculated variable for adults who are current smokers.* We derive _RFSMOK3 from _SMOKER3.

1	No	Respondents who reported they had not smoked at least 100 cigarettes in their lifetime, those who reported having smoked 100 cigarettes in their lifetime but do not currently smoke. (_SMOKER3=3, 4)
2	Yes	Respondents who reported having smoked at least 100 cigarettes in their lifetime and currently smoke. (_SMOKER3=1, 2)
9	Don't Know/ Refused/ Missing	Respondents who reported they did not know if they had smoked 100 cigarettes in their lifetime; those who refused to answer if they had smoked 100 cigarettes in their lifetime; those who didn't know if they now smoked every day, some days or not at all; those who refused to answer if they now smoked every day, some days or not at all; or those with missing responses. (_SMOKER3=9)

SAS Code:

```
IF _SMOKER3 IN (1,2) THEN _RFSMOK3=2;
 ELSE IF _SMOKER3 IN (3,4) THEN _RFSMOK3=1;
 ELSE _RFSMOK3=9;
```

Section 10: Alcohol Consumption

DRNKANY5 *Calculated variable for adults who reported having had at least one drink of alcohol in the past 30 days.* We derive DRNKANY5 from AKCDAY5.

1	Yes	Respondents who reported drinking at least one alcoholic beverage in the past 30 days. (1 <= ALCDAY <= 231)
2	No	Respondents who reported drinking no alcoholic beverages in the past 30 days. (ALCDAY5=888)
7	Don't Know/ Not Sure	Respondents who reported not knowing if they drank at least one alcoholic beverage in the past 30 days. (ALCDAY5=777)
9	Refused/Missing	Respondents who refused to answer or had a missing value for drinking at least one alcoholic beverage in the past 30 days. (ALCDAY5=999, Missing)

SAS Code:

```
IF 1 <= ALCDAY5 < 231 THEN DRNKANY5=1;
ELSE IF ALCDAY5=888 THEN DRNKANY5=2;
ELSE IF ALCDAY5=777 THEN DRNKANY5=7;
ELSE DRNKANY5=9;
```

Section 10: Alcohol Consumption

DROCDY3_ *Calculated variable for drink-occasions-per-day.* We derive DROCDY3_ from ALCDAY5 by dividing the ALCDAY5 variable by 7 days per week or 30 days per month.

0	No Drink-Occasions per day	Respondents reported no occasions per day that they consumed alcohol. (ALCDAY5=888)
1 - 899	Drink-Occasions per Day	Respondents reported number of occasions per day that they consumed alcohol. (ALCDAY5 not equal to 777, 888, 999, or missing)
900	Don't Know/ Not Sure Or Refused/ Missing	Respondents who reported they did not know how many days they had at least one drink of alcohol, those who refused to answer how many days they had at least one drink of alcohol, those with missing responses. (ALCDAY5=777, 999, or missing)

SAS Code:

```
IF ALCDAY5 NOTIN (888,777,999,.) THEN DO;
 IF 101 LE ALCDAY5 LE 107 THEN DROCDY3_=(ALCDAY5-100)/7;
 ELSE IF 201 LE ALCDAY5 LE 230 THEN DROCDY3_=(ALCDAY5-200)/30;
 END;
ELSE IF ALCDAY5 EQ 888 THEN DROCDY3_=0;
 ELSE DROCDY3_=9;
* DROCDY3_=round((DROCDY3_*100),1);
 *This is done after all of the alcohol calculations but the code is
included here;
```

Section 10: Alcohol Consumption

_RFBING5 *Calculated variable for binge drinkers (males having five or more drinks on one occasion, females having four or more drinks on one occasion).* We derive _RFBING5 from DRNK3GE5 and ALCDAY5.

1	No	Respondents who reported they did not drink in the past 30 days, or those who reported that they did drink alcohol in the past 30 days but did not report having five or more drinks of alcohol on an occasion. (ALCDAY5<231 and DRNK3GE5=88; or ALCDAY5=888)
2	Yes	Respondents who reported they did drink in the past 30 days and had five or more drinks on one or more occasions in the past month. (ALCDAY5<231 and 1<=DRNK3GE5<=76)
9	Don't Know/ Refused/Missing	Respondents who reported that they did not know if they had consumed five or more drinks of alcohol on one occasion or refused to answer if they had consumed five or more drinks of alcohol on one occasion, or those with missing responses. (DRNK3GE5=77, 99, missing; or ALCDAY5=777, 999, missing)

SAS Code:

```
IF ALCDAY5 NOTIN (888) THEN DO;
 IF 1 LE DRNK3GE5 LE 76 THEN _RFBING5=2;
 ELSE IF DRNK3GE5 IN (.,77,99) THEN _RFBING5=9;
 ELSE IF DRNK3GE5 IN (88) THEN _RFBING5=1;
 END;
ELSE IF ALCDAY5 = 888 THEN _RFBING5=1;
  ELSE _RFBING5=9;
```

Section 10: Alcohol Consumption

_DRNKDY4 *Calculated variable for calculated total number of alcoholic beverages consumed per day.* We derive _DRNKDY4 from DROCDY3_ and AVEDRNK2 by multiplying the total number of drink occasions per day (DROCDY3_) by the average number of drinks per occasion (AVEDRNK2).

0	Did Not Drink	Respondents who did not drink in the past month. (DROCDY3_=0)
1 - 9899	Number Of Drinks Per Day	Respondents reported number of alcoholic drinks per day. (0 < DROCDY3_ < 990)
9900	Don't Know/ Not Sure/ Refused/ Missing	Respondents who refused to report the number of alcohol drinks consumed per day, or respondents who did not know the number of alcohol drinks consumed per day, or those with missing responses or respondents who refused to report the number drink occasions per day, or respondents who did not know the number of drink occasions per day, or those with missing responses. (AVEDRNK2=.,77,99 or DROCDY3_=900)

SAS Code:

```
IF DROCDY3_ = 0 THEN _DRNKDY4=0;
ELSE IF DROCDY3_ = 9 THEN _DRNKDY4=99;
ELSE IF AVEDRNK2 IN (.,77,99) THEN _DRNKDY4=99;
ELSE _DRNKDY4=AVEDRNK2 * DROCDY3_;
* _DRNKDY4=ROUND((_DRNKDY4*100),1);
*This is done after all of the alcohol calculations but the code is
included here;
```

Section 10: Alcohol Consumption

_DRNKMO4 *Calculated variable for calculated total number of alcoholic beverages consumed per month.* We derive _DRNKMO4 by multiplying _DRNKDY4 by 30.

0	Did not drink in the past month	Respondents who did not consume any drinks of alcohol in the past month. (_DRNKDY4=0)
1 - 9998	Number of Drinks	Respondents reported number of alcoholic drinks per day. (0 < _DRNKDY4 < 9900)
9999	Don't know/ Refused/Missing	Respondents who reported they did not know if they consumed any drinks of alcohol in the past month, or those who refused to answer if they consumed any drinks of alcohol in the past month. (_DRNKDY4=9900)

SAS Code:

```
IF _DRNKDY4 NOTIN (.,99) THEN _DRNKMO4=_DRNKDY4*30;
ELSE _DRNKMO4=9999;
* _DRNKMO4=ROUND(_DRNKMO4,1);
*This is done after all of the alcohol calculations but the code is
included here;
```

Section 10: Alcohol Consumption

_RFDRHV4 *Calculated variable for heavy drinkers (adult men having more than two drinks per day and adult women having more than one drink per day).* We derive _RFDRHV4 from _DRNKDY4, ALCDAY5, and SEX.

1	No	Male respondents who reported having 2 drinks per day or less, or female respondents who reported having 1 drink per day or less. (Sex=1 and _DRNKDY4 <= 200 or Sex=2 and _DRNKDY4 <= 100 or ALCDAY5=888)
2	Yes	Male respondents who reported having more than 2 drinks per day, or female respondents who reported having more than 1 drink per day. (Sex=1 and _DRNKDY4 > 200 or Sex=2 and _DRNKDY4 > 100)
9	Don't Know/ Refused/Missing	Respondents with don´t know, refused or missing responses for ALCDAY5 or _DRNKDY4. (ALCDAY5=777, 999, or missing, or _DRNKDY43=99, or missing)

SAS Code:

```
IF SEX=1 AND _DRNKDY4 NOTIN (99,.) THEN DO;
 IF _DRNKDY4 GT 2 THEN _RFDRHV4=2;
 ELSE IF _DRNKDY4 LE 2 THEN _RFDRHV4=1;
 END;
 ELSE IF SEX=2 AND _DRNKDY4 NOTIN (99,.) THEN DO;
 IF _DRNKDY4 GT 1 THEN _RFDRHV4=2;
ELSE IF _DRNKDY4 LE 1 THEN _RFDRHV4=1;
 END;
 ELSE IF ALCDAY5 EQ 888 THEN _RFDRHV4=1;
 ELSE _RFDRHV4=9;
```

Section 10: Alcohol Consumption

_RFDRMN4 *Calculated variable for adult men who are heavy drinkers (having more than two drinks per day).* We derive _RFDRMN4 from _DRNKDY4 and SEX and ALCDAY5.

1	No	Male respondents who reported having 2 drinks per day or less. (SEX=1 and _DRNKDY4 <= 200 or ALCDAY5=888)
2	Yes	Male respondents who reported having more than 2 drinks per day. (SEX=1 and _DRNKDY4 > 200)
9	Don't know/ Refused/Missing	Male respondents with don´t know, refused or missing responses for ALCDAY5 or _DRNKDY4. (SEX=1 and ALCDAY5=777, 999, or missing, or _DRNKDY4=99, or missing)
.	Respondent is female	Female respondents. (SEX=2)

SAS Code:

```
IF SEX=1 THEN DO;
 IF _DRNKDY4 NOTIN (99,.) THEN DO;
 IF _DRNKDY4 GT 2 THEN _RFDRMN4=2;
 ELSE IF _DRNKDY4 LE 2 THEN _RFDRMN4=1;
 END;
 ELSE IF ALCDAY5 IN (888) THEN _RFDRMN4=1;
ELSE _RFDRMN4=9;
 END;
 ELSE IF SEX=2 THEN _RFDRMN4=.;
```

Section 10: Alcohol Consumption

_RFDRWM4 *Calculated variable for adult women who are heavy drinkers (having more than one drink per day).*

We derive _RFDRWM4 from _DRNKDY4 and SEX and ALCDAY5.

1	No	Female Respondents who reported having 1 drink per day or less. (SEX=2 and _DRNKDY4 <= 200 or ALCDAY5=888)
2	Yes	Female Respondents who reported having more than 1 drink per day. (SEX=2 and _DRNKDY4 > 200)
9	Don't know/ Refused/Missing	Female respondents with don´t know, refused or missing responses for ALCDAY5 or _DRNKDY4. (SEX=2 and ALCDAY5=777, 999, or missing, or _DRNKDY4=99, or missing)
.	Respondent is male	Male respondents. (SEX=1)

SAS Code:

```
IF SEX=2 THEN DO;
 IF _DRNKDY4 NOTIN (99,.) THEN DO;
 IF _DRNKDY4 GT 1 THEN _RFDRWM4=2;
 ELSE IF _DRNKDY4 LE 1 THEN _RFDRWM4=1;
 END;
 ELSE IF ALCDAY5 IN (888) THEN _RFDRWM4=1;
ELSE _RFDRWM4=9;
 END;
 Else IF SEX=1 THEN _RFDRWM4=.;
** ROUND OFF _DRNKMO4 TO NO DECIMAL PLACES ** MULTIPLY _DRNKDY4 BY
100 AND THEN ROUND OFF TO NO DECIMAL PLACES AND THEN REMOVE THE DECIMAL
PLACES **;
 DROCDY3_=round((DROCDY3_*100),1);
 _DRNKMO4=ROUND(_DRNKMO4,1);
 _DRNKDY4=ROUND((_DRNKDY4*100),1);
```

Section 11: Fruits & Vegetables

FTJUDA1_ *Calculated variable for fruit juice intake in times per day.* FTJUDA1_ converts the FRUITJU1 variable to a per day response. (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of fruit juice per day (FRUITJU1 not equal to 777,999, or missing)
.	Don't know/ Not Sure Or Refused/Missing	Respondents who reported they did not know the number of times fruit juice was consumed per day, those who refused to answer, and those with missing responses (FRUITJU1=777,999, or missing)

SAS Code:

```
IF 100 < FRUITJU1 < 200 THEN FTJUDA1_=FRUITJU1-100;
ELSE IF 200 < FRUITJU1 < 300 THEN
FTJUDA1_=(ROUND((FRUITJU1-200)/7,0.01));
ELSE IF 300 < FRUITJU1 < 400 THEN
FTJUDA1_=(ROUND((FRUITJU1-300)/30,0.01));
ELSE IF FRUITJU1 = 555 THEN FTJUDA1_=0;
ELSE IF FRUITJU1 = 300 THEN FTJUDA1_=0.02;
ELSE IF FRUITJU1 IN (.,777,999) THEN FTJUDA1_=.;
** ROUND OFF **;
FTJUDA1_=round((FTJUDA1_*100),1);
```

Section 11: Fruits & Vegetables

FRUTDA1_ *Calculated variable for fruit intake in times per day.* FRUTDA1_ converts the FRUIT1 variable to a per day response. (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of fruit per day (FRUIT1 not equal to 777,999, or missing)
.	Don't know/ Not Sure Or Refused/Missing	Respondents who reported they didn´t know the number of times fruit was consumed per day, those who refused to answer, and those with missing responses (FRUIT1=777, 999, or missing)

SAS Code:

```
IF 100 < FRUIT1 < 200  THEN FRUTDA1_=FRUIT1-100;
ELSE IF 200 < FRUIT1 < 300  THEN
FRUTDA1_=(ROUND((FRUIT1-200)/7,0.01));
ELSE IF 300 < FRUIT1 < 400  THEN
FRUTDA1_=(ROUND((FRUIT1-300)/30,0.01));
ELSE IF FRUIT1 = 555 THEN FRUTDA1_=0;
ELSE IF FRUIT1 = 300 THEN FRUTDA1_=0.02;
ELSE IF FRUIT1 IN (.,777,999) THEN FRUTDA1_=.;
** ROUND OFF **;
FRUTDA1_=round((FRUTDA1_*100),1);
```

Section 11: Fruits & Vegetables

BEANDAY_ *Calculated variable for bean intake in times per day.* BEANDAY_ converts the FVBEANS variable to a per day response (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of beans per day (FVBEANS not equal to 777, 999, or missing)
.	Don't know/ Not Sure Or Refused/ Missing	Respondents who reported they didn´t know the number of times beans were consumed per day, those who refused to answer, and those with missing responses (FVBEANS=777, 999, or missing)

SAS Code:

```
IF 100 < FVBEANS < 200   THEN BEANDAY_=FVBEANS-100;
ELSE IF 200 < FVBEANS < 300   THEN
BEANDAY_=(ROUND((FVBEANS-200)/7,0.01));
ELSE IF 300 < FVBEANS < 400   THEN
BEANDAY_=(ROUND((FVBEANS-300)/30,0.01));
ELSE IF FVBEANS = 555 THEN BEANDAY_=0;
ELSE IF FVBEANS = 300 THEN BEANDAY_=0.02;
ELSE IF FVBEANS IN (.,777,999)  THEN BEANDAY_=.;
** ROUND OFF **;
BEANDAY_=round((BEANDAY_*100),1);
```

Section 11: Fruits & Vegetables

GRENDAY_ *Calculated variable for dark green vegetable intake in times per day.* GRENDAY_ converts the FVGREEN variable to a per day response (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of dark green vegetables per day (FVGREEN not equal to 777,999, or missing)
.	Don't know/ Not Sure Or Refused/ Missing	Respondents who reported they did not know the number of times dark green vegetables were consumed per day, those who refused to answer, and those with missing responses (FVGREEN=777,999, or missing)

SAS Code:

```
IF 100 < FVGREEN < 200  THEN GRENDAY_=FVGREEN-100;
ELSE IF 200 < FVGREEN < 300  THEN
GRENDAY_=(ROUND((FVGREEN-200)/7,0.01));
ELSE IF 300 < FVGREEN < 400  THEN
GRENDAY_=(ROUND((FVGREEN-300)/30,0.01));
ELSE IF FVGREEN = 555 THEN GRENDAY_=0;
ELSE IF FVGREEN = 300 THEN GRENDAY_=0.02;
ELSE IF FVGREEN IN (.,777,999) THEN GRENDAY_=.;
** ROUND OFF **;
GRENDAY_=round((GRENDAY_*100),1);
```

Section 11: Fruits & Vegetables

ORNGDAY_ *Calculated variable for orange-colored vegetable intake in times per day.* ORNGDAY_ converts the FVORANG variable to a per day response (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of orange-colored vegetables per day (FVORANG not equal to 777,999, or missing)
.	Don't know/ Not Sure Or Refused/ Missing	Respondents who reported they didn´t know the number of times orange-colored vegetables were consumed per day, those who refused to answer, and those with missing responses (FVORANG=777,999, or missing)

SAS Code:

```
IF 100 < FVORANG < 200  THEN ORNGDAY_=FVORANG-100;
ELSE IF 200 < FVORANG < 300  THEN
ORNGDAY_=(ROUND((FVORANG-200)/7,0.01));
ELSE IF 300 < FVORANG < 400  THEN
ORNGDAY_=(ROUND((FVORANG-300)/30,0.01));
ELSE IF FVORANG = 555 THEN ORNGDAY_=0;
ELSE IF FVORANG = 300 THEN ORNGDAY_=0.02;
ELSE IF FVORANG IN (.,777,999) THEN ORNGDAY_=.;
** ROUND OFF **;
ORNGDAY_=round((ORNGDAY_*100),1);
```

Section 11: Fruits & Vegetables

VEGEDA1_ *Calculated variable for vegetable intake in times per day.* VEGEDA1_ converts the VEGETAB1 variable to a per day response. (Two implied decimal places)

0 - 9999	Times per day	Respondents reported intake of other vegetables per day (VEGETAB1 not equal to 777, 999, or missing)
.	Don't know/ Not Sure Or Refused/Missing	Respondents who reported they did not know the number of times other vegetables were consumed per day, those who refused to answer, and those with missing responses (VEGETAB1=777, 999, or missing)

SAS Code:

```
IF 100 < VEGETAB1 < 200 THEN VEGEDA1_=VEGETAB1-100;
ELSE IF 200 < VEGETAB1 < 300 THEN
VEGEDA1_=(ROUND((VEGETAB1-200)/7,0.01));
ELSE IF 300 < VEGETAB1 < 400 THEN
VEGEDA1_=(ROUND((VEGETAB1-300)/30,0.01));
ELSE IF VEGETAB1 = 555 THEN VEGEDA1_=0;
ELSE IF VEGETAB1 = 300 THEN VEGEDA1_=0.02;
ELSE IF VEGETAB1 IN (.,777,999) THEN VEGEDA1_=.;
** ROUND OFF **;
VEGEDA1_=round((VEGEDA1_*100),1);
```

Section 11: Fruits & Vegetables

_MISFRTN *Calculated variable for the number of missing fruit responses.* We derive _MISFRTN from MFTJUDA1_ and MFRUTDA1_.

0	No missing fruit responses	Respondents with no missing fruit responses
1 - 2	Has 1 or 2 missing fruit responses	Respondents with missing fruit responses

SAS Code:

```
IF FTJUDA1_=. THEN MFTJUDA1_=1;
ELSE MFTJUDA1_=0;
IF FRUTDA1_=. THEN MFRUTDA1_=1;
ELSE MFRUTDA1_=0;
_MISFRTN=SUM(MFTJUDA1_, MFRUTDA1_);
```

Section 11: Fruits & Vegetables

_MISVEGN *Calculated variable for the number of missing vegetable responses.* We derive _MISVEGN from MGRENDAY_, MORNGDAY_, MBEANDAY_ and MVEGEDA1_.

0	No missing vegetable responses	Respondents with no missing vegetable responses
1 - 4	Has 1, 2, 3, or 4 missing vegetable responses	Respondents with missing vegetable responses

SAS Code:

```
IF GRENDAY_=. THEN MGRENDAY_=1;
ELSE MGRENDAY_=0;
IF ORNGDAY_=. THEN MORNGDAY_=1;
ELSE MORNGDAY_=0;
IF BEANDAY_=. THEN MBEANDAY_=1;
ELSE MBEANDAY_=0;
IF VEGEDA1_=. THEN MVEGEDA1_=1;
ELSE MVEGEDA1_=0;
_MISVEGN=SUM(MGRENDAY_, MORNGDAY_, MBEANDAY_, MVEGEDA1_);
```

Section 11: Fruits & Vegetables

_FRTRESP *Calculated variable for missing any fruit responses.* _FRTRESP is derived from _MISFRTN.

0	Not Included-- Missing Fruit Responses	Respondents with a missing value for one of the fruit variables (1<=_MISFRTN<=2)
1	Included -- Not Missing Fruit Responses	Respondents with no missing fruit variables (_MISFRTN=0)

SAS Code:

```
_FRTRESP=0;
IF 1<=_MISFRTN<=2 THEN _FRTRESP=0;
ELSE IF _MISFRTN=0 THEN _FRTRESP=1;
```

Section 11: Fruits & Vegetables

_VEGRESP *Calculated variable for missing any vegetable responses.* We derive _VEGRESP from GRENDAY_, ORNGDAY_ , BEANDAY_ , VEGEDA1_ and _MISVEGN.

0	Not Included - Missing Vegetable Responses	Respondents with missing vegetable per day values (1<=_MISVEGN<=4)
1	Included-- Not Missing Vegetable Responses	Respondents with no missing vegetable per day values (_MISVEGN=0)
.	Not asked or Missing	Respondents with a 99 value for all vegetable per day variables.

SAS Code:

```
_VEGRESP=0;
IF 1<=_MISVEGN<=4 THEN _VEGRESP=0;
ELSE IF _MISVEGN=0 THEN _VEGRESP=1;
```

Section 11: Fruits & Vegetables

_FRUTSUM *Calculated variable for total fruits consumed per day.* We derived _FRUTSUM from the individual fruit variables (FTJUDA1_, FRUTDA1_). We exclude values for don´t know, refused, or missing" (99) from the sum.

0 - 99998	Number of Fruits consumed per day (two implied decimal places)	Number of Fruits consumed per day (two implied decimal places) (FTJUDA1_+FRUTDA1_)
.	Not asked or Missing	Respondents with a 99 value for all four fruits per day variables.

SAS Code:

```
_FRUTSUM= (FTJUDA1_/100)+ (FRUTDA1_/100);
_FRUTSUM=round((_FRUTSUM*100),1);
```

Section 11: Fruits & Vegetables

_VEGESUM *Calculated variable for total vegetables consumed per day.* We derive _VEGESUM from the individual vegetable variables (GRENDAY_, ORNGDAY_, BEANDAY_, and VEGEDA1_). We exclude values for don´t know, refused, or missing" (99) from the sum.

0 - 99998	Number of Vegetables consumed per day (two implied decimal places)	Sum of all vegetable per day values (two implied decimal places) (GRENDAY_+ORNGDAY_+BEANDAY_+VEGEDA1_)
.	Not asked or Missing	Respondents with a 99 value for all vegetable per day variables.

SAS Code:

```
_VEGESUM=
(GRENDAY_/100)+(ORNGDAY_/100)+(BEANDAY_/100)+(VEGEDA1_/100));
_VEGESUM=round((_VEGESUM*100),1);
```

Section 11: Fruits & Vegetables

_FRTLT1 *Calculated variable for consume fruit 1 or more times per day.* We derive _FRT1LT from _FRUTSUM.

1	Consumed fruit one or more times per day	Respondents that reported consuming Fruit 1 or more times a day (_FRUTSUM/100 >=1)
2	Consumed fruit less than one time per day	Respondents that reported consuming Fruit less than 1 time a day (_FRUTSUM/100 < 1)
9	Don´t know, refused or missing values	Respondents with don´t know, not sure, refused or missing responses (_FRUTSUM=.)

SAS Code:

```
IF 0 <= (_FRUTSUM/100) < 1 THEN _FRTLT1=2;
ELSE IF (_FRUTSUM/100) >= 1 THEN _FRTLT1=1;
ELSE _FRTLT1=9;
```

Section 11: Fruits & Vegetables

_VEGLT1 *Calculated variable for consume vegetables 1 or more times per day.* We derive _VEG1LT from _VEGESUM.

1	Consumed vegetables one or more times per day	Respondents who reported consuming vegetables 1 or more times a day (_VEGESUM/100 >=1)
2	Consumed vegetables less than one time per day	Respondents that reported consuming vegetables less than 1 time a day (_VEGESUM/100 < 1)
9	Don´t know, refused or missing values	Respondents with don´t know, not sure, refused or missing responses (_VEGESUM=.)

SAS Code:

```
IF 0 <= (_VEGESUM/100) < 1 THEN _VEGLT1=2;
ELSE IF (_VEGESUM/100) >= 1 THEN _VEGLT1=1;
ELSE _VEGLT1=9;
```

Section 11: Fruits & Vegetables

_FRT16 *Calculated variable for reported consuming fruit >16 per day.* We derive _FRT16 is derived from _FRUTSUM.

0	Not Included--Values are too high	Respondents with an out-of-range value for sum of fruits per day (_FRUTSUM>16)
1	Included--Values are in accepted range	Respondents with value for sum of fruits per day in acceptable range (_FRUTSUM<=16)
.	Not asked or Missing	Respondents with a 99 value for both fruit per day variables.

SAS Code:

```
IF (_FRUTSUM/100)>16 THEN _FRT16=0;
ELSE IF (_FRUTSUM/100)<=16 THEN _FRT16=1;
```

Section 11: Fruits & Vegetables

_VEG23 *Calculated variable for reported consuming vegetables >23 per day. We derive* _VEG23 from VEGESUM.

0	Not Included--Values are too high	Respondents with an out-of-range value for sum of vegetables per day (_VEGESUM>23)
1	Included--Values are in accepted range	Respondents with value for sum of vegetables per day in acceptable range (_VEGESUM<=23)
.	Not asked or Missing	Respondents with a 99 value for all vegetable per day variables.

SAS Code:

```
IF (_VEGESUM/100)>23 THEN _VEG23=0;
ELSE IF (_VEGESUM/100)<=23 THEN _VEG23=1;
```

Section 11: Fruits & Vegetables

_FRUITEX *Calculated variable for fruit exclusion from analyses.* We derive _FRUITEX from _FRTRESP.

0	No missing values and in accepted range	Respondents with no missing fruit values and in accepted range (_FRTRESP=1 AND _FRT16=1)
1	Missing Fruit responses	Respondents missing at least one fruit per day value (_FRTRESP=0)
2	Fruit values out of range	Respondents with an out-of-range value for sum of fruits per day (_FRTRESP=1 AND _FRT16=0)
.	Not asked or Missing	Respondents with a 99 value for both fruit per day variables.

SAS Code:

```
IF _FRTRESP=1 AND _FRT16=0 THEN _FRUITEX=2;
ELSE IF _FRTRESP=1 AND _FRT16=1 THEN _FRUITEX=0;
ELSE _FRUITEX=1;
```

Section 11: Fruits & Vegetables

_VEGETEX *Calculated variable for vegetable exclusion from analyses.* We derive _VEGETEX from _VEGRESP and _VEG23.

0	No missing values and in accepted range	Respondents with no missing vegetable per day values and in all accepted range (_VEGRESP=1 AND _VEG23=1)
1	Missing vegetable responses	Respondents with missing vegetable per day values (_VEGRESP=0)
2	Vegetable values out of range	Respondents with out-of-range vegetable per day values (_VEGRESP=1 AND _VEG23=0)
.	Not asked or Missing	Respondents with a 99 value for all vegetable per day variables.

SAS Code:

```
IF _VEGRESP=1 AND _VEG23=0 THEN _VEGETEX=2;
ELSE IF _VEGRESP=1 AND _VEG23=1 THEN _VEGETEX=0;
ELSE _VEGETEX=1;
```

Section 12: Exercise (Physical Activity)

_TOTINDA *Calculated variable for adults who reported doing physical activity or exercise during the past 30 days other than their regular job.* We derive _TOTINDA from EXERANY2.

1	Had physical activity or exercise	Respondents who reported doing any physical activity or exercise. (EXERANY2=1)
2	No physical activity or exercise in last 30 days	Respondents who reported doing no physical activity or exercise. (EXERANY2=2)
9	Don't know/ Refused/Missing	Respondents who reported they didn't know or refused to answer, and those with missing responses for the physical activity/exercise question. (EXERANY2=7, 9, missing)

SAS Code:

```
IF EXERANY2 IN (1) THEN _TOTINDA=1;
 ELSE IF EXERANY2 IN (2) THEN _TOTINDA=2;
 ELSE IF EXERANY2 IN (.,7,9) THEN _TOTINDA=9;
```

Section 12: Exercise (Physical Activity)

METVL11_ *Calculated variable for activity met value for first activity.* We derive METVL11_ from EXRACT11.

0	Activity MET Value	Estimated first activity MET value
1 - 128	Activity MET Value (one implied decimal place)	Estimated first activity MET value
.	Not asked or Missing	Respondents with a don´t know, refused or missing value for the first activity (EXRACT11=(77,99, missing))

SAS Code:

```
IF EXRACT11 IN (34,60,67,69) THEN METVL11_=0;
ELSE IF EXRACT11 IN (47) THEN METVL11_=2.5;
ELSE IF EXRACT11 IN (13,17,56,63) THEN METVL11_=3;
ELSE IF EXRACT11 IN (33,73) THEN METVL11_=3.3;
ELSE IF EXRACT11 IN (16,19,64,71) THEN METVL11_=3.5;
ELSE IF EXRACT11 IN (1,9,11,36) THEN METVL11_=3.8;
ELSE IF EXRACT11 IN (59,76) THEN METVL11_=4;
ELSE IF EXRACT11 IN (20,75) THEN METVL11_=4.3;
ELSE IF EXRACT11 IN (72) THEN METVL11_=4.8;
ELSE IF EXRACT11 IN (15,18,26,43,46,52) THEN METVL11_=5;
ELSE IF EXRACT11 IN (48,50) THEN METVL11_=5.3;
ELSE IF EXRACT11 IN (4,24,31) THEN METVL11_=5.5;
ELSE IF EXRACT11 IN (8,58) THEN METVL11_=5.8;
ELSE IF EXRACT11 IN (22,25,32,37,55,57,66,68) THEN METVL11_=6;
ELSE IF EXRACT11 IN (41) THEN METVL11_=6.3;
ELSE IF EXRACT11 IN (5) THEN METVL11_=6.5;
ELSE IF EXRACT11 IN (6,7) THEN METVL11_=6.8;
ELSE IF EXRACT11 IN (3,28,35,40,42,44,45,49,51) THEN METVL11_=7;
ELSE IF EXRACT11 IN (2,53,61) THEN METVL11_=7.3;
ELSE IF EXRACT11 IN (14) THEN METVL11_=7.8;
ELSE IF EXRACT11 IN (23,29,30,38,62) THEN METVL11_=8;
ELSE IF EXRACT11 IN (54) THEN METVL11_=9;
ELSE IF EXRACT11 IN (27) THEN METVL11_=9.8;
ELSE IF EXRACT11 IN (74) THEN METVL11_=10.3;
ELSE IF EXRACT11 IN (39) THEN METVL11_=11;
ELSE IF EXRACT11 IN (21) THEN METVL11_=12;
ELSE IF EXRACT11 IN (12) THEN METVL11_=12.5;
ELSE IF EXRACT11 IN (10) THEN METVL11_=12.8;
ELSE IF EXRACT11 IN (98) THEN METVL11_=4.5;
METVL11_=(ROUND(METVL11_,0.1))*10;
```

Section 12: Exercise (Physical Activity)

METVL21_ *Calculated variable for activity met value for second activity.* We derive METVL21_ from EXRACT21.

0	Activity MET Value	Estimated second activity MET value
1 - 128	Activity MET Value (one implied decimal place)	Estimated second activity MET value
.	Not asked or Missing	Respondents with a don´t know, refused or missing value for the second activity (EXRACT21=(77,99, missing))

SAS Code:

```
IF EXRACT21 IN (34,60,67,69,88) THEN METVL21_=0;
ELSE IF EXRACT21 IN (47) THEN METVL21_=2.5;
ELSE IF EXRACT21 IN (13,17,56,63) THEN METVL21_=3;
ELSE IF EXRACT21 IN (33,73) THEN METVL21_=3.3;
ELSE IF EXRACT21 IN (16,19,64,71) THEN METVL21_=3.5;
ELSE IF EXRACT21 IN (1,9,11,36) THEN METVL21_=3.8;
ELSE IF EXRACT21 IN (59,76) THEN METVL21_=4;
ELSE IF EXRACT21 IN (20,75) THEN METVL21_=4.3;
ELSE IF EXRACT21 IN (72) THEN METVL21_=4.8;
ELSE IF EXRACT21 IN (15,18,26,43,46,52) THEN METVL21_=5;
ELSE IF EXRACT21 IN (48,50) THEN METVL21_=5.3;
ELSE IF EXRACT21 IN (4,24,31) THEN METVL21_=5.5;
ELSE IF EXRACT21 IN (8,58) THEN METVL21_=5.8;
ELSE IF EXRACT21 IN (22,25,32,37,55,57,66,68) THEN METVL21_=6;
ELSE IF EXRACT21 IN (41) THEN METVL21_=6.3;
ELSE IF EXRACT21 IN (5) THEN METVL21_=6.5;
ELSE IF EXRACT21 IN (6,7) THEN METVL21_=6.8;
ELSE IF EXRACT21 IN (3,28,35,40,42,44,45,49,51) THEN METVL21_=7;
ELSE IF EXRACT21 IN (2,53,61) THEN METVL21_=7.3;
ELSE IF EXRACT21 IN (14) THEN METVL21_=7.8;
ELSE IF EXRACT21 IN (23,29,30,38,62) THEN METVL21_=8;
ELSE IF EXRACT21 IN (54) THEN METVL21_=9;
ELSE IF EXRACT21 IN (27) THEN METVL21_=9.8;
ELSE IF EXRACT21 IN (74) THEN METVL21_=10.3;
ELSE IF EXRACT21 IN (39) THEN METVL21_=11;
ELSE IF EXRACT21 IN (21) THEN METVL21_=12;
ELSE IF EXRACT21 IN (12) THEN METVL21_=12.5;
ELSE IF EXRACT21 IN (10) THEN METVL21_=12.8;
ELSE IF EXRACT21 IN (98) THEN METVL21_=4.5;
METVL21_=(ROUND(METVL21_,0.1))*10;
```

Section 12: Exercise (Physical Activity)

MAXVO2_ *Calculated variable for estimated age-gender specific maximum oxygen consumption.* We derive MAXVO2_ from SEX and AGE.

0 –501	Estimated Maximum Oxygen Consumption (two implied decimal places)	Respondents estimated maximum oxygen consumption ((IF (SEX=1) THEN MAXVO2_=60-(.55*AGE)) or (IF (SEX=2) THEN MAXVO2_=48-(.37*AGE)))
99900	Don't know/ Not Sure/Refused/ Missing	Respondents with a missing value for age

SAS Code:

```
MAXVO2_=999;
IF (18<= AGE <=99 & (SEX=1 OR SEX=2))THEN DO;
IF (SEX=1) THEN MAXVO2_=60-(.55*AGE);
ELSE IF (SEX=2) THEN MAXVO2_=48-(.37*AGE);
END;
 MAXVO2_=(ROUND(MAXVO2_,0.01)*100);
```

Section 12: Exercise (Physical Activity)

FC60_ *Calculated variable for estimated functional capacity.* We derive FC60_ from MAXVO2_.

0– 8590	Estimated Functional Capacity (2 implied decimal places)	Respondents estimated functional capacity ((ROUND((.60*(MAXVO2_/100)/3.5),0.01))*100)
99900	Don't know/ Not Sure/ Refused/ Missing	Respondents with no estimate for functional capacity

SAS Code:

```
IF (0 < MAXVO2_/100 < 55) THEN FC60_=(.60*(MAXVO2_/100))/3.5;
ELSE FC60_=999;
FC60_=(ROUND(FC60_,0.01))*100;
```

Section 12: Exercise (Physical Activity)

ACTIN11_ *Calculated variable for estimated activity intensity for first activity.* We derive ACTIN11_ from FC60_ and METVL11_.

0	Not Moderate or Vigorous or No Activity	Respondent reported first activity to be one with estimated intensity not moderate or vigorous ((METVL11_/10>=0)).
1	Moderate	Respondent reported first activity to be one with moderate estimated intensity ((METVL11_/10>=3.0)).
2	Vigorous	Respondent reported first activity to be one with vigorous estimated intensity ((METVL11_/10 >= FC60_/100)).
.	Not asked or Missing	Respondent reported first activity to be one with no estimated intensity.

SAS Code:

```
IF FC60_ < 99900 THEN DO;
IF ((METVL11_/10) >= (FC60_/100)) THEN ACTIN11_=2;
ELSE IF ((METVL11_/10) >= 3.0) THEN ACTIN11_=1;
ELSE IF ((METVL11_/10) >= 0) THEN ACTIN11_=0;
END;
```

Section 12: Exercise (Physical Activity)

ACTIN21_ *Calculated variable for estimated activity intensity for second activity.* We derive ACTIN21_ from FC60_ and METVL21_.

0	Not Moderate or Vigorous or No Activity	Respondent reported second activity to be one with estimated intensity not moderate or vigorous ((METVL21_/10>=0)).
1	Moderate	Respondent reported second activity to be one with moderate estimated intensity ((METVL21_/10>=3.0)).
2	Vigorous	Respondent reported second activity to be one with vigorous estimated intensity ((METVL21_/10 >= FC60_/100)).
.	Not asked or Missing	Respondent reported second activity to be one with no estimated intensity

SAS Code:

```
IF FC60_ < 99900 THEN DO;
IF ((METVL21_/10) >= (FC60_/100)) THEN ACTIN21_=2;
ELSE IF ((METVL21_/10) >= 3.0) THEN ACTIN21_=1;
ELSE IF ((METVL21_/10) >= 0) THEN ACTIN21_=0;
END;
```

Section 12: Exercise (Physical Activity)

PADUR1_ *Calculated variable for minutes of first activity.* We derive PADUR1_ from EXERHMM1.

0 –599	Minutes of Activity	Respondents number of minutes of first activity (INT(EXERHMM1/100)*60 + (EXERHMM1-INT(EXERHMM1/100)*100))
.	Not asked or Missing	Respondents who reported they didn´t know, refused or had a missing value for EXERHMM1 (EXERHMM1= (777,999, missing))

SAS Code:

```
IF EXERHMM1 NOTIN (777,999,.) THEN DO;
PADUR1_=INT(EXERHMM1/100)*60 + (EXERHMM1-INT(EXERHMM1/100)*100);
END;
```

Section 12: Exercise (Physical Activity)

PADUR2_ *Calculated variable for minutes of second activity.* We derive PADUR2_ from EXERHMM2.

0 – 599	Minutes of Activity	Respondents number of minutes of second activity (INT(EXERHMM2/100)*60 + (EXERHMM2-INT(EXERHMM2/100)*100))
.	Not asked or Missing	Respondents who reported they didn´t know, refused or had a missing value for EXERHMM2 (EXERHMM2= (777,999,.))

SAS Code:

```
IF EXERHMM2 NOTIN (777,999,.) THEN DO;
PADUR2_=INT(EXERHMM2/100)*60 + (EXERHMM2-INT(EXERHMM2/100)*100);
END;
```

Section 12: Exercise (Physical Activity)

PAFREQ1_ *Calculated variable for physical activity frequency per week for first activity.* We derive PAFREQ1_ from EXERANY2 and EXEROFT1.

0 – 98999	Activity times per week (3 implied decimal places)	Respondents report times per week for the first activity (EXERANY2=1 and (101 <= EXEROFT1 <= 199) or (201 <= EXEROFT1 <= 299)).
.	Not asked or Missing	Respondents whot did not report doing the first activity or did not know, refused, or had a missing value for EXEROFT1 ((EXERANY2=1 and EXEROFT1 = (777,999,missing)) or (EXERANY2=2,7,9,missing))

SAS Code:

```
IF EXERANY2=1 AND EXEROFT1 NOTIN (777,999,.) THEN DO;
IF (101 <= EXEROFT1 <= 199) THEN PAFREQ1_=EXEROFT1-100;
ELSE IF (201 <= EXEROFT1 <= 299) THEN PAFREQ1_=(EXEROFT1-200)/(30/7);
END;
ELSE PAFREQ1_=.;
PAFREQ1_=(ROUND(PAFREQ1_,.001))*1000;
```

Section 12: Exercise (Physical Activity)

PAFREQ2_ *Calculated variable for physical activity frequency per week for second activity.* We derive PAFREQ2_ from EXERANY2 and EXEROFT2.

0 – 98999	Activity times per week (3 implied decimal places)	Respondents report times per week for the second activity (EXERANY2=1 and (101 <= EXEROFT2 <= 199) or (201 <= EXEROFT2 <= 299))
.	Not asked or Missing	Respondents who did not report doing the second activity or didn´t know, refused or had a missing value for EXEROFT2 ((EXERANY2=1 and EXEROFT2 = (777,999,missing)) or (EXERANY2=2,7,9,missing))

SAS Code:

```
IF EXERANY2=1 AND EXEROFT2 NOTIN (777,999,.) THEN DO;
IF (101 <= EXEROFT2 <= 199) THEN PAFREQ2_=EXEROFT2-100;
ELSE IF (201 <= EXEROFT2 <= 299) THEN PAFREQ2_=(EXEROFT2-200)/(30/7);
END;
ELSE PAFREQ2_=.;
PAFREQ2_=(ROUND(PAFREQ2_,.001))*1000;
```

Section 12: Exercise (Physical Activity)

_MINAC11 *Calculated variable for minutes of physical activity per week for first activity.* We derive _MINAC11 from PADUR1_, PAFREQ1_, ACTIN11_ and EXRACT11.

0	Minutes of Activity per week	Respondents who reported doing zero minutes of first activity per week ((PADUR1_>=0 AND PADUR1_<10) or (PADUR2_=. AND ACTIN21_=0))
1 – 99999	Minutes of Activity per week	Respondents who reported doing one or more minutes of first activity per week (ROUND((PAFREQ1_/1000)*PADUR1_,1))
.	Not asked or Missing	Respondents who reported they didn´t know, refused or had a missing value for the number of minutes per week for the first activity

SAS Code:

```
IF PADUR1_>=10 THEN _MINAC11=ROUND((PAFREQ1_/1000)*PADUR1_,1);
ELSE IF (PADUR1_>=0 AND PADUR1_<10) THEN _MINAC11=0;
IF (ACTIN11_=0) THEN _MINAC11=0;
IF EXRACT11 IN (34,60,67,69) THEN _MINAC11=0;
```

Section 12: Exercise (Physical Activity)

_MINAC21 *Calculated variable for minutes of physical activity per week for second activity.* We derive _MINAC21 from PADUR1_, PAFREQ1_, ACTIN21_ and EXRACT21.

0	Minutes of Activity per week	Respondents who reported doing zero minutes of second activity per week ((PADUR2_>=0 AND PADUR2_<10) or (PADUR2_=. AND ACTIN21_=0))
1 – 99999	Minutes of Activity per week	Respondents who reported doing one or more minutes of second activity per week (ROUND((PAFREQ2_/1000)*PADUR2_))
.	Not asked or Missing	Respondents who reported they did not know, refused, or had a missing value for the number of minutes per week for the second activity

SAS Code:

```
IF PADUR2_>=10 THEN _MINAC21=ROUND((PAFREQ2_/1000)*PADUR2_);
ELSE IF (PADUR2_>=0 AND PADUR2_<10) THEN _MINAC21=0;
IF (ACTIN21_=0) THEN _MINAC21=0;
IF EXRACT21 IN (34,60,67,69,88) THEN _MINAC21=0;
```

Section 12: Exercise (Physical Activity)

STRFREQ_ *Calculated variable for strength activity frequency per week.* We derive STRFREQ_ from STRENGTH.

0 – 98999	Strength Activity times per week (3 implied decimal places)	Respondents reported times per week for strengthening activity
.	Not asked or Missing	Respondents who did not report doing any strengthening activity or did not know, refused, or had a missing value for STRENGTH

SAS Code:

```
IF STRENGTH IN (777,999,.) THEN STRFREQ_=.;
ELSE IF (STRENGTH < 200) THEN STRFREQ_=STRENGTH-100;
ELSE IF (200 < STRENGTH < 300)THEN STRFREQ_=(STRENGTH-200)/(30/7);
ELSE IF (STRENGTH = 888)THEN STRFREQ_=0;
STRFREQ_=(ROUND(STRFREQ_,.001))*1000;
```

Section 12: Exercise (Physical Activity)

PAMISS1_ *Calculated variable for missing physical activity data.* We derive PAMISS1_ from ACTIN11_, _MINAC11, ACTIN21_, _MINAC21 and EXERANY2.

0	Not Missing Physical Activity Data	Respondents with no missing physical activity data ((NMISS(ACTIN11_,_MINAC11,ACTIN21_,_MINAC21)=0 AND EXERANY2=1) or EXERANY2=2)
1	Missing Physical Activity Data	Respondents with missing physical activity data ((NMISS(ACTIN11_,_MINAC11,ACTIN21_,_MINAC21)>0 AND EXERANY2=1))
9	Don’t know/ Not Sure/ Refused	Respondents that didn´t know or refused to answer if they did any activity

SAS Code:

```
IF (NMISS(ACTIN11_,_MINAC11,ACTIN21_,_MINAC21)>0 AND EXERANY2=1)
THEN PAMISS1_=1;
ELSE IF EXERANY2=1 OR EXERANY2=2 THEN PAMISS1_=0;
ELSE PAMISS1_=9;
```

Section 12: Exercise (Physical Activity)

PAMIN11_ *Calculated variable for minutes of physical activity per week for first activity.* We derive PAMIN11_ from ACTIN11_ and _MINAC11.

0 – 99999	Minutes of Activity per week	Respondents minutes of first activity or vigorous equivalent minutes
.	Not asked or Missing	Respondents with no value for minutes of first activity and no value for vigorous equivalent minutes

SAS Code:

```
IF ACTIN11_=2 THEN DO;
PAMIN11_=ROUND(_MINAC11*2,1);
END;
ELSE IF ACTIN11_=1 THEN DO;
PAMIN11_=ROUND(_MINAC11,1);
END;
IF ACTIN11_=0 THEN PAMIN11_=0;
```

Section 12: Exercise (Physical Activity)

PAMIN21_ *Calculated variable for minutes of physical activity per week for second activity.* We derive PAMIN21_ from ACTIN21_ and _MINAC21.

0 – 99999	Minutes of Activity per week	Respondents' minutes of second activity or vigorous equivalent
.	Not asked or Missing	Respondents with no value for minutes of second activity and no value for vigorous equivalent minutes

SAS Code:

```
IF ACTIN21_=2 THEN DO;
PAMIN21_=ROUND(_MINAC21*2,1);
END;
ELSE IF ACTIN21_=1 THEN DO;
PAMIN21_=ROUND(_MINAC21,1);
END;
IF ACTIN21_=0 THEN PAMIN21_=0;
```

Section 12: Exercise (Physical Activity)

PA1MIN_ *Calculated variable for minutes of total physical activity per week.* We derive PA1MIN_ from PAMIN11_ and PAMIN21_.

0 – 99999	Minutes of Activity per week	Respondents minutes of combined activity or vigorous equivalent minutes (ROUND((SUM(PAMIN11_,PAMIN21_)),1))
.	Not asked or Missing	Respondents with no value for minutes of combined activity and no value for vigorous equivalent minutes

SAS Code:

```
PA1MIN_=ROUND((SUM(PAMIN11_,PAMIN21_)),1);
```

Section 12: Exercise (Physical Activity)

PAVIG11_ *Calculated variable for minutes of vigorous physical activity per week for first activity.* We derive PAVIG11_ from ACTIN11_ and _MINAC11.

0 – 99999	Minutes of Activity per week	Respondents vigorous activity minutes of first activity
.	Not asked or Missing	Respondents with no value for vigorous activity minutes of first activity

SAS Code:

```
IF ACTIN11_=2 THEN PAVIG11_=ROUND(_MINAC11,1);
ELSE IF ACTIN11_ IN (0,1) THEN PAVIG11_=0;
```

Section 12: Exercise (Physical Activity)

PAVIG21_ *Calculated variable for minutes of vigorous physical activity per week for second activity.* We derive PAVIG21_ from ACTIN21_ and _MINAC21.

0– 99999	Minutes of Activity per week	Respondents' vigorous activity minutes of second activity
.	Not asked or Missing	Respondents with no value for vigorous activity minutes of second activity

SAS Code:

```
IF ACTIN21_=2 THEN PAVIG21_=ROUND(_MINAC21,1);
ELSE IF ACTIN21_ IN (0,1) THEN PAVIG21_=0;
```

Section 12: Exercise (Physical Activity)

PA1VIGM_ *Calculated variable for minutes of total vigorous physical activity per week.* We derive PA1VIGM_ from PAVIG11_ and PAVIG21_.

0 – 99999	Minutes of Activity per week	Respondents vigorous activity minutes of combined activity (ROUND((SUM(PAVIGM1_,PAVIGM2_)),1))
.	Not asked or Missing	Respondents with no value for vigorous activity minutes of combined activity

SAS Code:

```
PA1VIGM_=ROUND((SUM(PAVIG11_,PAVIG21_)),1);
```

Section 12: Exercise (Physical Activity)

_PACAT1 *Calculated variable for physical activity categories.* We derive _PACAT1 from EXERANY2, PA1MIN_, PAMISS1_ and PA1VIGM_.

1	Highly Active	Respondents who reported doing enough physical activity to meet the 300-minute (or vigorous equivalent) aerobic recommendation ((PA1MIN_ > 300) or (PA1VIGM_ > 150))
2	Active	Respondents who reported doing 150–300 minutes (or vigorous equivalent) of physical activity (150 <= PA1MIN_ <= 300 AND PAMISS1_=0)
3	Insufficiently Active	Respondents who reported doing insufficient physical activity (11–149 minutes) (1 <= PA1MIN_ <=149 AND PAMISS1_=0)
4	Inactive	Respondents who reported doing no physical activity ((PA1MIN_=0 AND PAMISS1_=0) or (EXERANY2=2))
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or didn´t know how many days or didn´t know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF EXERANY2=2 THEN _PACAT1=4;
 ELSE IF EXERANY2 IN (.,7,9) THEN _PACAT1=9;
ELSE IF EXERANY2=1 THEN DO;
IF PA1MIN_ > 300 THEN _PACAT1=1;
ELSE IF PA1VIGM_ > 150 THEN _PACAT1=1;
ELSE IF 150 <= PA1MIN_ <= 300 AND PAMISS1_=0 THEN _PACAT1=2;
ELSE IF 1 <= PA1MIN_ <=149 AND PAMISS1_=0 THEN _PACAT1=3;
ELSE IF PA1MIN_=0 AND PAMISS1_=0 THEN _PACAT1=4;
ELSE _PACAT1=9;
END;
```

Section 12: Exercise (Physical Activity)

_PAINDX1 *Calculated variable for physical activity index.* We derive _PAINDX1 from EXERANY2, PAMISS1_ and PA1MIN_.

1	Meet Aerobic Recommendations	Respondents who reported doing 150+ minutes (or vigorous equivalent) of physical activity (PA1MIN_ >= 150)
2	Did Not Meet Aerobic Recommendations	Respondents who reported doing insufficient physical activity (0-149 minutes) ((0 <= PA1MIN_ < 150 AND PAMISS1_=0) or (EXERANY2=2))
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF EXERANY2=2 THEN _PAINDX1=2;
ELSE IF EXERANY2 IN (.,7,9) THEN _PAINDX1=9;
ELSE IF EXERANY2=1 THEN DO;
IF PA1MIN_ >= 150 THEN _PAINDX1=1;
ELSE IF 0 <= PA1MIN_ < 150 AND PAMISS1_=0 THEN _PAINDX1=2;
ELSE _PAINDX1=9;
END;
```

Section 12: Exercise (Physical Activity)

_PA150R2 *Calculated variable for adults who participated in 150 minutes (or vigorous equivalent minutes) of physical activity per week.* We derive _PA150R2 from EXERANY2, PA1VIGM_, PAMISS1_, and PA1MIN_.

1	150+ minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing enough physical activity to meet the 150-minute aerobic recommendation (PA1MIN_ >= 150 or PA1VIGM_ >= 75)
2	1–149 minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing insufficient physical activity to meet the 150-minute aerobic recommendation (0 < PA1MIN_ < 150 AND PAMISS1_=0)
3	0 minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing no physical activity (PA1MIN_=0 AND PAMISS1_=0)
9	Don't know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF EXERANY2=2 THEN _PA150R2=3;
ELSE IF EXERANY2 IN (7,9,.) THEN _PA150R2=9;
ELSE IF EXERANY2=1 THEN DO;
IF PA1VIGM_ >= 75 THEN _PA150R2=1;
ELSE IF PA1MIN_ >= 150 THEN _PA150R2=1;
ELSE IF 0 < PA1MIN_ < 150 AND PAMISS1_=0 THEN _PA150R2=2;
ELSE IF PA1MIN_=0 AND PAMISS1_=0 THEN _PA150R2=3;
ELSE _PA150R2=9;
END;
```

Section 12: Exercise (Physical Activity)

_PA300R2 *Calculated variable for adults who participated in 300 minutes (or vigorous equivalent minutes) of physical activity per week.*

We derive _PA300R2 from EXERANY2, PAMISS1_ and PA1MIN_.

1	301+ minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing enough physical activity to meet the 300-minute aerobic recommendation (PA1MIN_ > 300)
2	1–300 minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing insufficient physical activity to meet the 300-minute aerobic recommendation (0 < PA1MIN_ <= 300 AND PAMISS1_=0)
3	0 minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing no physical activity ((PA1MIN_=0 AND PAMISS1_=0) or (EXERANY2=2))
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF EXERANY2=2 THEN _PA300R2=3;
ELSE IF EXERANY2 IN (9,7,.) THEN _PA300R2=9;
ELSE IF EXERANY2=1 THEN DO;
IF PA1MIN_ > 300 THEN _PA300R2=1;
ELSE IF 0 < PA1MIN_ <= 300 AND PAMISS1_=0 THEN _PA300R2=2;
ELSE IF PA1MIN_=0 AND PAMISS1_=0 THEN _PA300R2=3;
ELSE _PA300R2=9;
END;
```

Section 12: Exercise (Physical Activity)

_PA30021 *Calculated variable for adults who participated in 300 minutes (or vigorous equivalent minutes) of physical activity per week (2-levels).* We derive PA30021 from _PA300R2.

1	301+ minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing enough physical activity to meet the 300+ minute aerobic recommendation (_PA300R2=1)
2	0–300 minutes (or vigorous equivalent minutes) of physical activity	Respondents who reported doing insufficient physical activity to meet the 300-minute aerobic recommendation (_PA300R2 IN (2,3))
9	Don't know/ Not Sure/ Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

	SAS Code:	`IF _PA300R2=1 THEN _PA30021=1;`
		`ELSE IF _PA300R2 IN (2,3) THEN _PA30021=2;`
		`ELSE _PA30021=9;`

Section 12: Exercise (Physical Activity)

_PASTRNG *Calculated variable for muscle strengthening recommendation.* We derive _PASTRNG from STRFREQ_.

1	Meet muscle strengthening recommendations	Respondents who reported doing enough physical activity to meet the strengthening recommendation (STRFREQ_/1000 >=2)
2	Did not meet muscle strengthening recommendations	Respondents who reported doing physical activity but not enough to meet the strengthening recommendation (0 <= STRFREQ_/1000 < 2)
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

	SAS Code:	`IF STRFREQ_/1000 >=2 THEN _PASTRNG=1;`
		`ELSE IF 0 <= STRFREQ_/1000 < 2 THEN _PASTRNG=2;`
		`ELSE _PASTRNG=9;`

Section 12: Exercise (Physical Activity)

_PAREC1 *Calculated variable for aerobic and strengthening guideline.* We derive _PAREC1 from _PASTRNG and _PAINDX1.

1	Met Both Guidelines	Respondents who reported doing enough physical activity to meet the aerobic and strengthening recommendations (_PASTRNG=1 AND _PAINDX1=1)
2	Met Aerobic Guidelines Only	Respondents who reported doing enough physical activity to meet the aerobic recommendation but not the strengthening (_PASTRNG=2 AND _PAINDX1=1)
3	Met Strengthening Guidelines Only	Respondents who reported doing enough physical activity to meet the strengthening recommendation but not the aerobic (_PASTRNG=1 AND _PAINDX1=2)
4	Did Not Meet Either Guideline	Respondents who reported doing physical activity but not enough to meet either the aerobic or strengthening recommendations (_PASTRNG=2 AND _PAINDX1=2)
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF _PASTRNG=1 AND _PAINDX1=1 THEN _PAREC1=1;
ELSE IF _PASTRNG=2 AND _PAINDX1=1 THEN _PAREC1=2;
ELSE IF _PASTRNG=1 AND _PAINDX1=2 THEN _PAREC1=3;
ELSE IF _PASTRNG=2 AND _PAINDX1=2 THEN _PAREC1=4;
ELSE _PAREC1=9;
```

Section 12: Exercise (Physical Activity)

_PASTAE1 *Calculated variable for aerobic and strengthening (2-level).* We derive _PASTAE1 from _PAREC1.

1	Met Both Guidelines	Respondents who reported doing enough physical activity to meet the aerobic and strengthening recommendations (_PAREC1=1)
2	Did Not Meet Both Guidelines	Respondents who reported doing physical activity but not enough to meet both the aerobic and strengthening recommendations (_PAREC1 IN (2,3,4))
9	Don't know/ Not Sure/Refused/ Missing	Respondents who reported they did not know whether they did physical activity or did not know how many days or did not know how much time they did the activity, those who refused to answer, and those with missing responses

SAS Code:

```
IF _PAREC1=1 THEN _PASTAE1=1;
ELSE IF _PAREC1 IN (2,3,4) THEN _PASTAE1=2;
ELSE _PASTAE1=9;
```

Section 13: Arthritis Burden

_LMTACT1 *Calculated variable for limited usual activities.* We derive _LMTACT1 from HAVARTH3 and LMTJOIN3.

1	Told have arthritis and have limited usual activities	Respondents who have been told they have arthritis and have limited usual activities HAVARTH3=1 and LMTJOIN3=1
2	Told have arthritis and no limited usual activities	Respondents who have been told they have arthritis and have no limited usual activities HAVARTH3=1 and LMTJOIN3=2
3	Not told they have arthritis	Respondents who have not been told they have arthritis HAVARTH3=2
9	Don´t know, refused or missing usual activities limited	Respondents who have been told they have arthritis and reported they did not know, refused or had a missing value for limited usual activities HAVARTH3=1 and LMTJOIN3=7, 9 or missing
.	Don´t know, refused or missing arthritis or not asked	Respondents who refused, did not know or were missing a response to being told they had arthritis HAVARTH3=7, 9 or missing

SAS Code:

```
IF HAVARTH3=1 THEN DO;
 IF LMTJOIN3=1 THEN _LMTACT1=1;
 ELSE IF LMTJOIN3=2 THEN _LMTACT1=2;
 ELSE _LMTACT1=9;
 END;
 ELSE IF HAVARTH3=2 THEN _LMTACT1=3;
 ELSE _LMTACT1=.;
```

Section 13: Arthritis Burden

_LMTWRK1 *Calculated variable for limited work activities.* We derive _LMTWRK1 from HAVARTH3 and ARTHDIS2.

1	Told Have Arthritis and Have Limited Work	Respondents who have been told they have arthritis and have limited work HAVARTH3=1 and ARTHDIS2=1
2	Told Have Arthritis and No Limited Work	Respondents who have been told they have arthritis and have no limited work HAVARTH3=1 and ARTHDIS2=2
3	Not Told They Have Arthritis	Respondents who have not been told they have arthritis HAVARTH3=2
9	Don´t Know, Refused or Missing Work Limited	Respondents who have been told they have arthritis and reported they didn´t know, refused or had a missing value for limited work HAVARTH3=1 and ARTHDIS2=7, 9 or missing
.	Don´t Know, Refused, or Missing Arthritis or Not Asked	Respondents who refused, didn´t know or were missing a response to being told they had arthritis HAVARTH3=7, 9 or missing

SAS Code:

```
IF HAVARTH3=1 THEN DO;
 IF ARTHDIS2=1 THEN _LMTWRK1=1;
 ELSE IF ARTHDIS2=2 THEN _LMTWRK1=2;
 ELSE _LMTWRK1=9;
 END;
 ELSE IF HAVARTH3=2 THEN _LMTWRK1=3;
 ELSE _LMTWRK1=.;
```

Section 13: Arthritis Burden

_LMTSCL1 *Calculated variable for limited social activities.* We derive_LMTSCL1 from HAVARTH3 and ARTHSOCL.

1	Told Have Arthritis and Social Activities Limited a Lot	Respondents who have been told they have arthritis and have a lot of limited social activities HAVARTH3=1 and ARTHSOCL=1
2	Told Have Arthritis And Social Activities Limited a Little	Respondents who have been told they have arthritis and have a little of limited social activities HAVARTH3=1 and ARTHSOCL=2
3	Told Have Arthritis and Social Activities Not Limited	Respondents who have been told they have arthritis and have no limited social activities HAVARTH3=1 and ARTHSOCL=3
4	Not Told They Have Arthritis	Respondents who have not been told they have arthritis HAVARTH3=2
9	Don´t Know, Refused or Missing Social Activities Limited	Respondents who have been told they have arthritis and reported they did not know, refused, or had a missing value for limited social activities HAVARTH3=1 and ARTHSOCL=7, 9 or missing
.	Don´t Know, Refused or Missing Arthritis or Not Asked	Respondents who refused, did not know or were missing a response to being told they had arthritis HAVARTH3=7, 9 or missing

SAS Code:

```
IF HAVARTH3=1 THEN DO;
IF ARTHSOCL=1 THEN _LMTSCL1=1;
ELSE IF ARTHSOCL=2 THEN _LMTSCL1=2;
ELSE IF ARTHSOCL=3 THEN _LMTSCL1=3;
ELSE _LMTSCL1=9;
END;
ELSE IF HAVARTH3=2 THEN _LMTSCL1=4;
ELSE _LMTSCL1=.;
```

Section 14: Seatbelt Use

_RFSEAT2 *Calculated variable for always or nearly always wear seat belts calculated variable.* We derive _RFSEAT2 from SEATBELT.

1	Always or Almost Always Wear Seat Belt	Respondents who reported they always or nearly always use a seatbelt when they ride or drive in a car or they never drive or ride in a car. (SEATBELT=1,2,8)
2	Sometimes, Seldom, or Never Wear Seat Belt	Respondents who reported they sometimes, seldom or never use a seatbelt when they ride or drive in a car. (SEATBELT=3,4,5)
9	Don't know/ Not Sure or Refused/Missing	Respondents who reported they do not know, are not sure, refused or with missing responses for if they use a seatbelt when they ride or drive in a car. (SEATBELT=7,9 or missing)

	SAS Code:	`IF SEATBELT IN (1,2,8) THEN _RFSEAT2=1;`
		`ELSE IF SEATBELT IN (3,4,5) THEN _RFSEAT2=2;`
		`ELSE _RFSEAT2=9;`

Section 14: Seatbelt Use

_RFSEAT3 *Calculated variable for always wear seat belts calculated variable.* We derive _RFSEAT3 from SEATBELT.

1	Always Wear Seat Belt	Respondents who reported they always use a seatbelt when they ride or drive in a car or they never drive or ride in a car. (SEATBELT=1,8)
2	Don't Always Wear Seat Belt	Respondents who reported they nearly always, sometimes, seldom or never use a seatbelt when they ride or drive in a car. (SEATBELT=2,3,4,5)
9	Don't know/ Not Sure Or Refused/ Missing	Respondents who reported they do not know, are unsure, refused, or have missing responses to if they use a seatbelt when they ride or drive in a car. (SEATBELT=7,9 or missing)

	SAS Code:	`IF SEATBELT IN (1,8) THEN _RFSEAT3=1;`
		`ELSE IF SEATBELT IN (2,3,4,5) THEN _RFSEAT3=2;`
		`ELSE _RFSEAT3=9;`

Section 15: Immunization

_FLSHOT6 *Calculated variable for adults aged 65+ who have had a flu shot within the past year.* We derive_FLSHOT6 from FLUSHOT6.

1	Yes	Respondents aged 65 or older who reported having a flu shot within the past 12 months. (AGE >= 65 and FLUSHOT6=1)
2	No	Respondents aged 65 or older who reported not having had a flu shot within the past 12 months. (AGE >= 65 and FLUSHOT6=2)
9	Don't know/ Not Sure or Refused/Missing	Respondents who did not know their age, those who refused to report their age, those who did not know if they had a flu shot in the past 12 months, or those who refused to answer if they had a flu shot in the past 12 months, or those with missing responses. (AGE >= 65 and FLUSHOT6=7,9, or missing or AGE=7,9, or missing)
.	Age Less Than 65	Respondents aged 18-64. (18 <= AGE <= 64)

SAS Code:

```
IF AGE GE 65 THEN DO;
 IF FLUSHOT6=1 THEN _FLSHOT6=1;
 ELSE IF FLUSHOT6=2 THEN _FLSHOT6=2;
 ELSE IF FLUSHOT6 IN (.,7,9) THEN _FLSHOT6=9;
 END;
 ELSE IF AGE IN (.,7,9) THEN _FLSHOT6=9;
 ELSE _FLSHOT6=.;
```

Section 15: Immunization

_PNEUMO2 *Calculated variable for adults aged 65+ who have ever had a pneumonia vaccination.* We derive _PNEUMO2 from PNEUVAC3.

1	Yes	Respondents aged 65 or older who reported having a pneumonia shot. (AGE >= 65 and FLUSHOT3=1)
2	No	Respondents aged 65 or older who reported not having had a pneumonia shot. (AGE >= 65 and FLUSHOT3=2)
9	Don't know/ Not Sure or Refused/Missing	Respondents who did not know their age, those who refused to report their age, those who did not know if they ever had a pneumonia shot, those who refused to answer if they had a pneumonia shot, or those with missing responses. (AGE >= 65 and PNEUVAC3=7,9, or missing or AGE=7,9, or missing)
.	Age Less Than 65	Respondents aged 18-64. (18 <= AGE <= 64)

SAS Code:

```
IF AGE GE 65 THEN DO;
 IF PNEUVAC3=1 THEN _PNEUMO2=1;
 ELSE IF PNEUVAC3=2 THEN _PNEUMO2=2;
 ELSE IF PNEUVAC3 IN (.,7,9) THEN _PNEUMO2=9;
 ELSE _PNEUMO2=.;
 END;
 ELSE IF AGE IN (.,7,9) THEN _PNEUMO2=9;
 ELSE _PNEUMO2=.;
```

Section 16: HIV/AIDS

_AIDTST3 *Calculated variable for adults who have ever been tested for HIV.* We derive _AIDTST3 from HIVTST6.

1	Yes	Respondents who reported to having been tested for HIV. (HIVTST6=1)
2	No	Respondents who did not report having been tested for HIV. (HIVTST6=2)
9	Don't know/ Not Sure/ Refused	Respondents who reported they did not know if they had been tested for HIV, or those who refused to answer if they had been tested for HIV. (HIVTST6=7,9)
.	Not asked or missing	Respondents with missing responses for HIVTST6. (HIVTST6=missing)

SAS Code:

```
IF HIVTST6=1 THEN _AIDTST3=1;
 ELSE IF HIVTST6=2 THEN _AIDTST3=2;
 ELSE IF HIVTST6 IN (7,9) THEN _AIDTST3=9;
 ELSE IF HIVTST6=. THEN _AIDTST3=.;
```

For more information, please refer to the following links on the BRFSS Web page:

Annual Survey Data and Support Documentation
State Coordinators
Questionnaires

List of all calculated variables in the 2013 data set.

_RFHLTH
_HCVU651
_RFHYPE5
_CHOLCHK
_RFCHOL
_LTASTH1
_CASTHM1
_ASTHMS1
_DRDXAR1
MRACORG1
MRACASC1
_PRACE1
_MRACE1
_M_RACE
_HISPANC
_RACE
_RACEG21
_RACEGR3
_RACE_G1
_AGEG5YR
_AGE65YR
_AGE_G
HTIN4
HTM4
WTKG3
_BMI5
_BMI5CAT
_RFBMI5
_CHLDCNT
_EDUCAG
_INCOMG
_SMOKER3
_RFSMOK3
DRNKANY5
DROCDY3_
_RFBING5
_DRNKDY4
_DRNKMO4
_RFDRHV4
_RFDRMN4
_RFDRWM4
FTJUDA1_
FRUTDA1_
BEANDAY_
GRENDAY_
ORNGDAY_

VEGEDA1_
_MISFRTN
_MISVEGN
_FRTRESP
_VEGRESP
_FRUTSUM
_VEGESUM
_FRTLT1
_VEGLT1
_FRT16
_VEG23
_FRUITEX
_VEGETEX
_FRTLT1
_VEGLT1
_TOTINDA
METVL11_
METVL21_
MAXVO2_
FC60_
ACTIN11_
ACTIN21_
PADUR1_
PADUR2_
PAFREQ1_
PAFREQ2_
_MINAC11
_MINAC21
STRFREQ_
PAMISS1_
PAMIN11_
PAMIN21_
PA1MIN_
PAVIG11_
PAVIG21_
PA1VIGM_
_PACAT1
_PAINDX1
_PA150R2
_PA300R2
_PA30021
_PASTRNG
_PAREC1
_PASTAE1
_LMTACT1
_LMTWRK1
_LMTSCL1
_RFSEAT2

_RFSEAT3
_FLSHOT6
_PNEUMO2
_AIDTST3
_AGE80
_CHISPNC
CRACORG1
CRACASC1
_CRACE1
_IMPCAGE
_IMPCRAC
_IMPCSEX