# **/\*The SAS program (HEI-2015 Individual Scores per day using NHANES 2011-2012 data (and FPED))**

# **PerDay.sas\*/**

**/\*INSTRUCTIONS – complete tasks 1-4 in this section, and run these SAS codes before proceeding to the HEI-2015 scoring program that follows\*/**

1. /\*Create a folder on your computer “home folder”, and save the FPED data, NHANES data, Demographic data, and the required HEI-2015 macro in it. Specify the path to the folder. \*/

%let home = C:\Users\Documents\FPED\_NHANES; /\*In this Example, the “home” folder is in C Drive, within Documents, and is called FPED\_NHANES. \*/

1. /\*Libnames here specify the input files. \*/

libname NH “&home\NH”;

libname FPED “&home\FPED”; /\*In this Example, the FPED data are in a folder called “FPED”, and the NHANES and Demographic data are in a folder called “NH”, all saved within the “home” folder. These are SAS datasets. \*/

1. /\*Create a folder in the "Home" folder, where the output file, containing HEI-2015 component and total scores for each respondent, for the intake day, are to be exported. Specify the name of the folder. \*/

filename RES “&home\RES”; /\*In this Example, the folder is called “RES”, within the “home” folder, and the exported results will be a csv file called “hei2015r”. \*/

1. /\*Read in required HEI-2015 scoring macro. This macro must be saved within the home folder. \*/

%include ““&home\hei2015.score.macro.sas”;

/\*NOTE: Once you have all the steps above, all you need to do is run the SAS program below. Unless you used different names for your datasets and folders, no other action is required from you. \*/

title 'HEI-2015 scores for NHANES 2011-2012 day 1, AGE >= 2, RELIABLE DIETS, Include Pregnant and Lactating Women';

/\*Step 1: locate the required datasets and variables \*/

\*part a: get FPED data per day;

**data** FPED;

set FPED.fped\_dr1tot\_1112;

**run**;

\*part b: get individual total nutrient intake if reliable recall status;

**data** NUTRIENT (keep=SEQN WTDRD1 DR1TKCAL DR1TSFAT DR1TALCO DR1TSODI DR1DRSTZ DR1TMFAT DR1TPFAT);

set NH.DR1TOT\_G;

if DR1DRSTZ=**1**; /\*reliable dietary recall status\*/

**run**;

\*part c: get demographic data for persons aged two and older;

**data** DEMO (keep=SEQN RIDAGEYR RIAGENDR SDDSRVYR SDMVPSU SDMVSTRA);

set NH.DEMO\_G;

if RIDAGEYR >= **2**;

**run**;

/\*Step 2: Combine the required datasets\*/

**proc** **sort** data=FPED;

by SEQN;

**run**;

**proc** **sort** data=NUTRIENT;

by SEQN;

**run**;

**proc** **sort** data=DEMO;

by SEQN;

**run**;

**data** COHORT;

merge NUTRIENT (in=N) DEMO (in=D) FPED;

by SEQN;

if N and D;

**run**;

/\*Step 3: Creates additional required variables: FWHOLEFRT, MONOPOLY, VTOTALLEG, VDRKGRLEG, PFALLPROTLEG and PFSEAPLANTLEG \*/

**data** COHORT;

set COHORT;

by SEQN;

FWHOLEFRT=DR1T\_F\_CITMLB+DR1T\_F\_OTHER;

MONOPOLY=DR1TMFAT+DR1TPFAT;

VTOTALLEG=DR1T\_V\_TOTAL+DR1T\_V\_LEGUMES;

VDRKGRLEG=DR1T\_V\_DRKGR+DR1T\_V\_LEGUMES;

PFALLPROTLEG=DR1T\_PF\_MPS\_TOTAL+DR1T\_PF\_EGGS+DR1T\_PF\_NUTSDS+DR1T\_PF\_SOY+DR1T\_PF\_LEGUMES;

PFSEAPLANTLEG=DR1T\_PF\_SEAFD\_HI+DR1T\_PF\_SEAFD\_LOW+DR1T\_PF\_NUTSDS+DR1T\_PF\_SOY+DR1T\_PF\_LEGUMES;

**run**;

/\*Step 4: Apply the HEI-2015 scoring macro. \*/

%***HEI2015*** (indat= COHORT,

kcal= DR1TKCAL,

vtotalleg= VTOTALLEG,

vdrkgrleg= VDRKGRLEG,

f\_total= DR1T\_F\_TOTAL,

fwholefrt= FWHOLEFRT,

g\_whole= DR1T\_G\_WHOLE,

d\_total= DR1T\_D\_TOTAL,

pfallprotleg= PFALLPROTLEG,

pfseaplantleg= PFSEAPLANTLEG,

monopoly= MONOPOLY,

satfat= DR1TSFAT,

sodium= DR1TSODI,

g\_refined= DR1T\_G\_REFINED,

add\_sugars= DR1T\_ADD\_SUGARS,

outdat= HEI2015);

/\*Step 5: Displays and saves the results. \*/

\*part a: this program saves one HEI-2015 score for each individual, based on one 24HR;

**data** HEI2015R (keep=SEQN DR1TKCAL HEI2015C1\_TOTALVEG HEI2015C2\_GREEN\_AND\_BEAN HEI2015C3\_TOTALFRUIT HEI2015C4\_WHOLEFRUIT

HEI2015C5\_WHOLEGRAIN HEI2015C6\_TOTALDAIRY HEI2015C7\_TOTPROT HEI2015C8\_SEAPLANT\_PROT HEI2015C9\_FATTYACID HEI2015C10\_SODIUM

HEI2015C11\_REFINEDGRAIN HEI2015C12\_SFAT HEI2015C13\_ADDSUG HEI2015\_TOTAL\_SCORE);

set HEI2015;

**run**;

\*part b: calculates an unweighted mean across all individuals in group;

**proc** **means** n nmiss min max mean data=HEI2015R;

**run**;

\*part c: saves results as CSV file one line per day;

**proc** **export** data=HEI2015R

file=RES

dbms=csv

replace;

**run**;