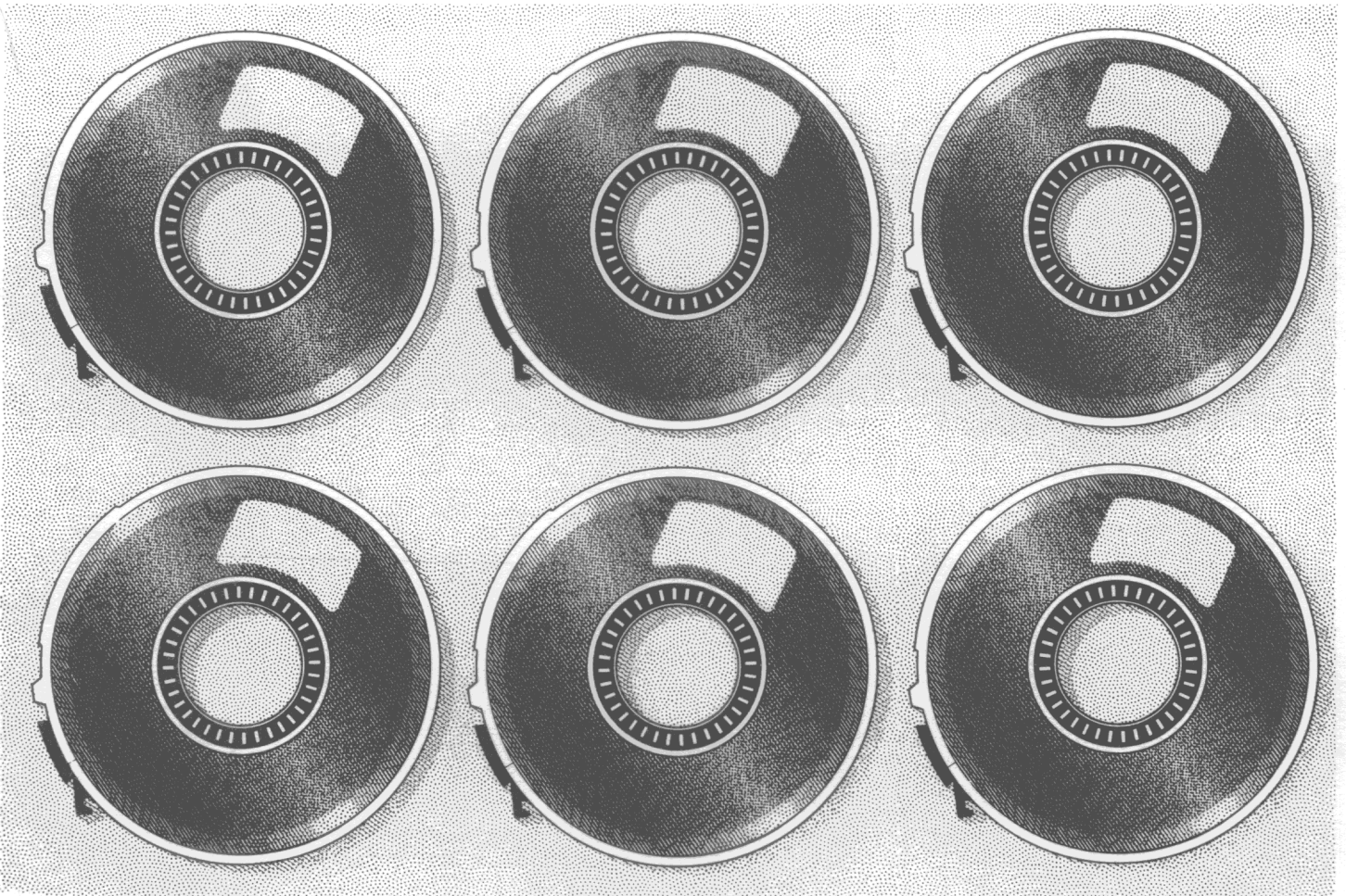


Public Use Data Tape Documentation

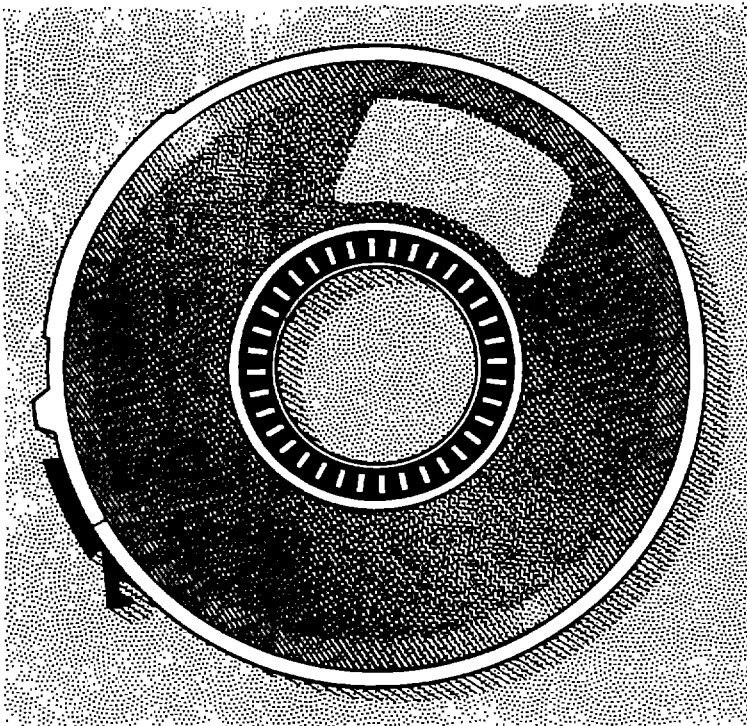
FILE COPY

Hematology and Biochemistry, Ages 6 months-74 years
Catalog Number 5411, Version 2
National Health and Nutrition Examination Survey, 1976-80



Public Use Data Tape Documentation

Hematology and Biochemistry, Ages 6 months-74 years
Catalog Number 5411, Version 2
National Health and Nutrition Examination Survey, 1976-80



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
National Center for Health Statistics

Hyattsville, Maryland
January 1990

HEMATOLOGY AND BIOCHEMISTRY

SECOND NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY, 1976-80

NHANES II

Documentation for Public Use Tape

Catalog Number 5411

Version 2

Hematology and Biochemistry, Ages 6 Months - 74 Years

This data tape contains demographic data and blood and urine assessments for persons 6 months through 74 years of age examined in the second National Health and Nutrition Examination Survey (NHANES II), conducted during 1976-1980 by the National Center for Health Statistics, U.S. Public Health Service. A previous version of this tape with selected blood assessments was released in 1982. This version includes blood and urine assessments not previously released because of various methodological and analytical concerns. The user should pay close attention to the detailed notes which describe the issues or problems encountered with these assessments.

NCHS PUBLIC USE TAPES

Public use data tapes from the National Center for Health Statistics (NCHS) for all NHANES II components will be released as soon as the data have been compiled and documented. NHANES II data tapes are available for purchase from:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, Virginia 22161

(703) 487-4650

A list of NCHS public use data tapes that can be purchased from NTIS can be obtained from:

Scientific and Technical Information Branch
National Center for Health Statistics
Center Building, Room 1-57
3700 East-West Highway
Hyattsville, Maryland 20782

(301) 436-8500

USE OF NCHS DATA TAPES

The National Center for Health Statistics requests the cooperation of recipients of data tapes in certain actions related to their use.

Any publication based on the data should acknowledge NCHS as the original source. It should include a disclaimer which credits the authors for any analyses, interpretations, or conclusions, and not NCHS, which is responsible only for the data.

Users who wish to publish a technical description of the data should make a reasonable effort to insure that the description is consistent with that published by NCHS. This does not mean, however, that NCHS will review such descriptions.

NCHS would appreciate receiving reprints of journal articles or other publications based upon findings from the NHANES II survey. Please send them to the address below.

The data tapes have been carefully edited. Some of the continuous data items have extremely high or low values. It has been verified that the values appear that way on the original interview documents; that is, it has been verified that the values have not resulted from incorrect keypunching. Within each data tape numerous consistency checks have been performed. However, due to the large volume of data collected in the survey, it is likely that a small number of errors or discrepancies remain undetected. NCHS would like to be informed if any such errors are detected so that errata sheets can be issued to previous purchasers and corrections made to a new data tape, if appropriate. Please contact:

Division of Health Examination Statistics
National Center for Health Statistics
Center Building, Room 2-58
3700 East-West Highway
Hyattsville, Maryland 20782
(301) 436-7068

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I. NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES II)

A. HISTORY AND SCOPE

1. Description of Survey: NHANES II was one of a series of population based surveys conducted by the National Center for Health Statistics to help determine the health status of the Nation. Data were collected through response to questionnaires on medical history, food consumption, and health-related behavior. Data also were collected through direct medical examination. The tape documented here contains data from the demographic and physician examination parts of the survey for persons 6 months through 74 years of age. A detailed description of the design, content, questionnaires, and operation of NHANES II is provided in the following report: "Plan and Operation of the Second National Health and Nutrition Examination Survey, 1976-1980," DHHS Pub. No. (PHS) 81-1317, Vital and Health Statistics, Series 1, No. 15, Public Health Service, available at cost from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The stock number is 017-022-00752-5. One copy is provided with the documentation herein, and a general summary of the data collection techniques and content is given in Appendix A.

2. Target Population: NHANES II was conducted on a nationwide probability sample of approximately 28,000 persons 6 months through 74 years of age from the civilian, noninstitutionalized population of the United States. The survey started in February 1976 and was completed in February 1980. The NHANES II sample was selected so that certain population groups thought to be at high risk of malnutrition (persons with low incomes, preschool children, and the elderly) were oversampled. Adjusted sampling weights were then computed for 76 age, sex, and race categories to inflate the sample in such a manner as to closely reflect the estimated civilian, noninstitutionalized U.S. population 6 months through 74 years of age at the midpoint of the survey (March 1, 1978).

B. SAMPLE DESIGN AND RECOMMENDATIONS FOR ANALYSIS

NHANES II uses a multistage sample designed to represent the civilian, noninstitutionalized population of the United States, 6 months through 74 years of age. Since the sample is not a simple random one and certain population groups were oversampled, it is necessary to incorporate the person's sample weight for proper analysis of the data. The sample weight is a composite of the individual selection probability, adjustments for nonresponse, and poststratification adjustments.

NHANES II provides information on 20,322 individuals who were both interviewed and examined, and on another 4,964 individuals who were interviewed but not examined, in the age range 6 months through 74 years of age. In addition to the general examination components, several more detailed examinations were performed on subsamples of the population. Therefore, instead of there being one sample weight per person, there are several sample weights for each person. For a person not selected for a particular subsample, the associated subsample weight is zero. When analyzing the special subsamples, the analyst must be careful to select the appropriate sampling weight from the weights found in tape locations 282-317. For a more complete description of how the sample weights are calculated, see the detailed note section of this documentation. This file contains data on all 20,322 examined persons 6 months through 74 years of age.

The NHANES II data were collected using a complex sample design involving both clustering and stratification. Because of the complex design and the ratio adjustments applied to the sample weights, the direct application of standard statistical analysis methods for variance estimation and hypothesis testing may be very misleading. The modification of statistical analysis procedures to incorporate the effects of complex

survey designs is an important area of research; however, the current methodologies appropriate for the analysis of data from such surveys have not been made readily available in the standard packaged statistical software.

There are computer programs available which provide the capability of variance estimation for complex sample designs. The balanced repeated replication approach¹ is utilized in &REPERR &PSALMS to calculate the variance-covariance matrix. Both routines are available within the OSIRIS IV library.² SURREGR³ and SUPERCARP⁴ are programs that calculate the variance-covariance matrix using the linearization approach⁵ (Taylor series expansion). Another program, SESUDAAN,⁶ calculates variances and design effects. SURREGR and SESUDAAN are special procedures for the SAS package, which is available from SAS Institute, Box 8000, Carey, N.C., 27511.

In order to provide the user with the capability of estimating the complex sample variances in the NHANES II data using the above procedures, Strata and Pseudo Primary Sampling Unit (PSU) codes have been provided on all data tapes in positions 324-326. These variables and the sample weights are necessary for the calculation of variances.

Even though the overall number of examined persons in this survey is quite large for statistical inference purposes, subclass analyses can lead to estimators that are unstable, particularly estimates of variances. Consequently, analyses of subclasses require that the user pay particular attention to the coefficient of variation for the estimates of means, proportions and totals. In addition, small sample sizes, or a small number of PSU's used in the variance calculations, may produce unstable estimates of the variances using the above computer programs.

An NCHS publication discusses these issues and describes analytic strategies for examining various hypotheses for the first National Health and Nutrition Examination Survey (NHANES I), which used a similar type of complex sample design.⁷

II. HEMATOLOGY AND BIOCHEMISTRY, AGES 6 MONTHS - 74 YEARS

A. DESCRIPTION

This data tape contains demographic data and blood and urine assessments for all examined persons 6 months through 74 years of age.

B. DEMOGRAPHIC DATA COLLECTION

An advance letter, announcing the forthcoming arrival of an interviewer from the U.S. Bureau of the Census, was mailed to each household that fell into the NHANES II probability sample. The interviewer subsequently visited the household to ascertain its composition, select the sample person(s), and administer demographic and medical history questionnaires. Demographic information relating to the household, the housing unit, and each sample person 6 months through 11 years of age was obtained from an available and competent household respondent. (In contrast, the preferred respondent for the medical information for persons 12 through 74 years of age was the actual sample person, with proxy response accepted when the sample person was not available.)

C. BLOOD AND URINE ASSESSMENTS

The blood and urine assessments were collected at the time of the medical examination in the Mobile Examination Center. They were analyzed in laboratories at a later time. Selected laboratory methods have been described elsewhere (see Reference No. 19).

D. DATA QUALITY AND EDITING

Extensive work was done to evaluate the quality control of the laboratories and to edit the blood and urine data. Whenever possible, data were checked for internal consistency. If any problems are found, please contact NCHS.

III. TAPE CHARACTERISTICS AND DESCRIPTION

A. TAPE CHARACTERISTICS

Title: Hematology and Biochemistry, Ages 6 Months - 74 Years

Catalog Number: 5411

Data Set Name: HEHANES2.DU541102

Recording Mode: Fixed Block, EBCDIC

Record Length: 530

Blocksize: 21200

Channel: 9 track

Number of Records: 20,322

Number of Reels: 1

Created by: Division of Health Examination Statistics
National Center for Health Statistics
Hyattsville, Maryland

B. INDEX TO TAPE POSITIONS

1. <u>Demographic Section</u>	<u>Tape Positions</u>
a. <u>Residence Data</u>	
Sample Sequence Number.....	1- 5
Catalog Number (5371-for Demographic Data only).....	6- 9
Unused position.....	10
Size of place.....	11
SMSA-not SMSA.....	12
Unused positions.....	13-23
Type of living quarters.....	24
Land usage.....	25
If rural, asked does this place have 10 acres or more?.....	26
If 10 acres or more, asked if in the last 12 months did sales of farm produce and livestock amount to \$50 or more?.....	27
If less than 10 acres, asked if in the last 12 months did sales of farm produce and live stock amount to \$250 or more?.....	28
Unused position.....	29
Total number of persons in household.....	30-31
Total number of sample persons in household.....	32-33
b. <u>Sample Person Data</u>	
Unused position.....	34
Family relationship.....	35
Examination status.....	36
Family unit number.....	37-41
Unused positions.....	42-44
Age-months (at interview).....	45-46
Age-years (at interview).....	47-48
Unused positions.....	49-50
Date of birth-month.....	51-52
Date of birth-year.....	53-54
Sex.....	55
Race.....	56
In what State was he/she born?.....	57-58
Is he/she married, widowed, divorced, separated or never married?.....	59
National origin or ancestry.....	60-61
Education level.....	62-63
Grade completed.....	64
What was he/she doing during most of the past 12 months?.....	65
What was he/she doing?.....	66
Did he/she work at a job or business at any time during the past three months?.....	67
Did he/she work full or part-time when working?.....	68

Demographic Section (Cont.)

<u>Sample Person Data (Cont.)</u>	<u>Tape Positions</u>
Was he/she working within last two weeks not counting work around the house?.....	69
Even though he/she did not work, does he/she have a job or business?.....	70
Was he/she looking for work or on layoff from a job?.....	71
Which - looking for work or on layoff from a job?.....	72
What kind of industry or business is this?.....	73-75
What kind of work was he/she doing?.....	76-78
Was he/she in private company or business or working for individual for wages, salary or commission?.....	79
Did he/she ever serve in the armed forces of the U.S.?.....	80
When did he/she serve?.....	81
Unused positions.....	82-90

c. Household Data

How many rooms are in this?.... Count the kitchen, but not the bath.....	91
How many bedrooms are in this?.....	92
Do you have complete kitchen facilities in your living quarters, that is a kitchen sink with piped water, a refrigerator and a range or cookstove? (Asked only of unrelated household members.).....	93
Do you have access to complete kitchen facilities in this house?.....	94
Do you have access to a range or cookstove?.....	95
Do you have access to a refrigerator?.....	96
Do you have access to a sink with piped water?.....	97
Is there piped water in this house (these living quarters)?.....	98
Is there both hot and cold water?.....	99
Are these kitchen facilities used by anyone not living in this household?.....	100
What is the main type of heating system you have?.....	101-102
Do you have air conditioning?.....	103
How many motor vehicles are owned or regularly used for transportation by members of your family?.....	104
Is any language other than English spoken by family members living here?.....	105
What language?.....	106
Which of these income groups represents your total combined family income for the past 12 months?.....	107-108

Demographic Section (Cont.)

Household Data (Cont.)

Tape Positions

During the past 12 months, how much money did you and all members of your family receive in wages or salaries before deductions (under \$7,000 only)?.....	109-112
Social security or railroad retirement?.....	113
Unused position.....	114
If yes, how much?.....	115-118
Welfare payments or other public assistance?.....	119
Unused position.....	120
If yes, how much?.....	121-124
Unemployment compensation or workmen's compensation?.....	125
Unused position.....	126
If yes, how much?.....	127-130
Government employee pension or private pensions?.....	131
Unused position.....	132
If yes, how much?.....	133-136
Dividends, interest or rent?.....	137
Unused position.....	138
If yes, how much?.....	139-142
Net income from their own business (nonfarm), professional practice, or partnership?.....	143
Unused position.....	144
If yes, how much?.....	145-148
Net income from a farm?.....	149
Unused position.....	150
If yes, how much?.....	151-154
Veteran's payments?.....	155
Unused position.....	156
If yes, how much?.....	157-160
Alimony, child support or other support from persons not in household?.....	161
Unused position.....	162
If yes, how much?.....	163-166
Any other income?.....	167
Unused position.....	168
If yes, how much?.....	169-172
Total amount.....	173-176
Check Item B - Food stamps available.....	177
Are you certified to participate in the food stamp program?.....	178
Are you buying food stamps now?.....	179
What is the main reason you are not participating in the program?.....	180
Are you certified for commodity distribution program?.....	181

Demographic Section (Cont.)

Household Data (Cont.)

Tape Positions

Are you receiving commodity foods now for your family?.....	182
Why aren't you participating in the program?.....	183
Date of exam.....	184-189
Age in years (at examination).....	190-191
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Race-sex recode for sample persons.....	206
Farm, nonfarm recode for sample person.....	207
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Poverty index.....	210-212
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d. Head of Household Data

Age in years.....	247-248
Unused positions.....	249-250
Date of birth-month.....	251-252
Date of birth-year.....	253-254
Sex.....	255
Race.....	256
In what State was he/she born?.....	257-258
Is he/she married, widowed, divorced, separated or never married?.....	259
National origin or ancestry?.....	260-261
Education level.....	262-263
Grade completed.....	264
What was he/she doing most of the past 12 months?.....	265
What was he/she doing?.....	266
Did he/she work at job or business during past three months?.....	267
Did he/she work full or part-time when working?.....	268
Did he/she work at any time the last two weeks not counting work around the house?.....	269
Even though he/she did not work, does he/she have a job or business?.....	270
Was he/she looking for work or on layoff from a job?.....	271
Which - looking for work or on layoff from a job?.....	272
Type of industry or business.....	273-275
What kind of work was he/she doing?.....	276-278
Was he/she in private company or business or working for individual for wages, salary or commission?.....	279
Did he/she ever serve in the armed forces of the U.S.?.....	280
When did he/she serve?.....	281

Demographic Section (Cont.)

<u>2. Sample Weight Section</u>	<u>Tape Positions</u>
Examined final weight.....	282-287
Medical history interview final weight.....	288-293
Glucose Tolerance Test final examined weight.....	294-299
Lead final examined weight.....	300-305
Carboxyhemoglobin final examined weight.....	306-311
Bile acids final examined weight.....	312-317
Unused positions.....	318-323
Strata code.....	324-325
Pseudo PSU code.....	326
Poverty Non-Poverty Segments.....	327
Serum ferritin final examined weight.....	328-333
Folates, Vitamin B ₁₂ and differential counts final examined weight.....	334-339
Unused positions.....	340-350
<u>3. Blood and Urine Data Section</u>	
Catalog number.....	351-354
Specimen collection.....	355
Session.....	356
Hematocrit.....	357-359
Hematocrit imputation code.....	360
Hemoglobin.....	361-363
Hemoglobin imputation code.....	364
Red blood cell count.....	365-367
White blood cell count.....	368-370
Mean corpuscular volume.....	371-374
Mean corpuscular hemoglobin.....	375-377
Mean corpuscular hemoglobin concentration.....	378-380
Serum iron.....	381-383
Serum total iron-binding capacity.....	384-386
Transferrin saturation.....	387-389
Serum albumin.....	390-392
Serum vitamin C.....	393-395
Serum zinc.....	396-398
Serum copper.....	399-401
Serum vitamin A.....	402-404
Erythrocyte protoporphyrin.....	405-408
Lead.....	409-411
Carboxyhemoglobin.....	412-415
Methemoglobin.....	416-419
Carboxyhemoglobin imputation code.....	420

Demographic Section (Cont.)

3. Blood and Urine Data Section (Contd.)

Serum lipids, lipoprotein and related data.....	421-439
Oral glucose tolerance related data.....	440-464
Oral glucose challenge results.....	465-474
Serum ferritin.....	475-478
RBC folate.....	479-482
Serum folate.....	483-486
Serum B ₁₂	487-490
Differential counts.....	491-510
Serum creatinine.....	511-513
Urine multistix test results.....	514-521
Bile acid data.....	522-527
Unused positions.....	528-530

C. USE OF SPECIAL TERMS

For the demographic data, the term "blank but applicable", is used to indicate a data item that was to have a response for a sample person but for which no usable data were provided. This includes unanswered data fields, as well as those containing impossible entries: i.e., out-of-range or inconsistent with other entries. The term "blank" refers to data items where the sample person was not supposed to respond to the question.

The notation "see detailed note" is intended to refer the user to the section Detailed Notes. In this section, a comprehensive description of the field is given.

D. TAPE DESCRIPTION

1. DEMOGRAPHIC DATA

-----		-----
TAPE POSITION, ITEM DESCRIPTION, AND CODES		CONTROL
-----		COUNTS
-----		-----
a. RESIDENCE DATA IN POSITIONS 001-034		

POS. 001-005	SAMPLE SEQUENCE NUMBER	
	00001-27796.....	20,322
POS. 006-009	CATALOG NUMBER	
	5371.....	20,322
POS. 010	UNUSED POSITION	
POS. 011	SIZE OF PLACE (SEE DETAILED NOTE)	
	1=URBANIZED AREA WITH 3,000,000 OR MORE.....	2,530
	2=URBANIZED AREA 1,000,000 TO 2,999,999.....	2,502
	3=URBANIZED AREA WITH 250,000 TO 999,999.....	2,564
	4=URBANIZED AREA UNDER 250,000.....	1,902
	5=URBAN PLACE 25,000 OR MORE OUTSIDE URBANIZED AREA.....	955
	6=URBAN PLACE 10,000-24,999 OUTSIDE URBANIZED AREA.....	922
	7=URBAN PLACE 2,500-9,999 OUTSIDE URBANIZED AREA.....	1,556
	8=RURAL.....	7,391
POS. 012	SMSA-NOT SMSA (SEE DETAILED NOTE)	
	1=IN SMSA, IN CENTRAL CITY.....	5,709
	2=IN SMSA, NOT IN CENTRAL CITY.....	5,620
	4=NOT IN SMSA.....	8,993
POS. 013-023	UNUSED POSITIONS	
POS. 024	TYPE OF LIVING QUARTERS (QUES. 7)	
	1=HOUSING UNIT.....	20,131
	2=OTHER UNIT.....	191

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 025 LAND USAGE (QUES. 9)	
1=URBAN.....	12,969
2=RURAL.....	7,353
POS. 026 IF RURAL, ASKED DOES THIS PLACE HAVE 10 ACRES OR MORE? (QUES. 11A)	
1=YES.....	1,549
2=NO.....	5,804
9=NOT APPLICABLE.....	12,969
POS. 027 IF 10 ACRES OR MORE, ASKED IF IN THE PAST 12 MONTHS DID SALES OF FARM PRODUCTS AND LIVE STOCK AMOUNT TO \$50 OR MORE? (QUES. 11B)	
1=YES.....	890
2=NO.....	659
9=NOT APPLICABLE.....	18,773
POS. 028 IF LESS THAN 10 ACRES, ASKED IF IN THE PAST 12 MONTHS DID SALES OF FARM PRODUCTS AND LIVE STOCK AMOUNT TO \$250 OR MORE? (QUES. 11C)	
1=YES.....	190
2=NO.....	5,614
9=NOT APPLICABLE.....	14,518
POS. 029 UNUSED POSITION	
POS. 030-031 TOTAL NUMBER OF PERSONS IN HOUSEHOLD	
01-15 AS GIVEN.....	20,322

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 032-033 TOTAL NUMBER OF SAMPLE PERSONS IN FAMILY	
01-06 AS GIVEN.....	20,322
POS. 034 UNUSED POSITION	
b. <u>SAMPLE PERSON DATA IN POSITIONS 035-081</u>	
POS. 035 FAMILY RELATIONSHIP	
1=HEAD, ONE PERSON LIVING ALONE OR WITH NON-RELATIVES....	2,185
2=HEAD, TWO OR MORE RELATED PERSONS IN FAMILY.....	4,969
3=WIFE.....	3,869
4=CHILD.....	8,301
5=OTHER RELATIVE.....	950
6=FOSTER CHILD.....	40
7=HUSBAND.....	8
POS. 036 EXAMINATION STATUS	
1=EXAMINED.....	20,322
2=NOT EXAMINED.....	0
POS. 037-041 FAMILY UNIT SEQUENCE NUMBER (SEE DETAILED NOTE)	
00001-21050 AS GIVEN.....	20,322
POS. 042-044 UNUSED POSITIONS	
POS. 045-46 (QUES. 3) AGE-MONTHS (AT INTERVIEW)	
06-11 MONTHS.....	356
BLANK, IF GREATER THAN 11 MONTHS.....	19,966
POS. 047-048 AGE-YEARS (AT INTERVIEW) (QUES. 3)	
01-74 YEARS.....	19,966
00, IF LESS THAN 12 MONTHS.....	356

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 049-050 UNUSED POSITIONS	
POS. 051-052 DATE OF BIRTH-MONTH (QUES. 2)	
01-12 MONTH.....	20,322
POS. 053-054 DATE OF BIRTH-YEAR (QUES. 2)	
01-79 YEAR.....	20,322
POS. 055 SEX (QUES. 4)	
1=MALE.....	9,983
2=FEMALE.....	10,339
POS. 056 RACE (QUES. 5) (SEE DETAILED NOTE)	
1=WHITE.....	17,105
2=BLACK.....	2,763
3=OTHER.....	454
POS. 057-058 IN WHAT STATE WAS HE/SHE BORN? (QUES. 6) (SEE DETAILED NOTE)	
01-97.....	20,086
88=BLANK, BUT APPLICABLE.....	236
POS. 059 IS HE/SHE NOW MARRIED, WIDOWED, DIVORCED, SEPARATED, OR NEVER MARRIED? (QUES. 7)	
1=UNDER 17.....	7,511
2=MARRIED.....	8,196
3=WIDOWED.....	1,151
4=DIVORCED.....	658
5=SEPARATED.....	332
6=NEVER MARRIED.....	2,437
8=BLANK, BUT APPLICABLE.....	37

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 060-061 NATIONAL ORIGIN OR ANCESTRY (QUES. 8)	
01=COUNTRIES OF CENTRAL OR SOUTH AMERICA.....	121
02=CHICANO.....	43
03=CUBAN.....	95
04=MEXICAN.....	258
05=MEXICANO.....	82
06=MEXICAN-AMERICAN.....	419
07=PUERTO RICAN.....	192
08=OTHER SPANISH.....	100
09=OTHER EUROPEAN, SUCH AS GERMAN, FRENCH, ENGLISH, IRISH...	14,221
10=BLACK, NEGRO OR AFRO-AMERICAN.....	2,662
11=AMERICAN INDIAN OR ALASKAN NATIVE.....	270
12=ASIAN OR PACIFIC ISLANDER SUCH AS CHINESE, JAPANESE, KOREAN, PHILIPPINO, SAMOAN.....	382
13=ANOTHER GROUP NOT LISTED.....	1,069
88=BLANK, BUT APPLICABLE.....	408
POS. 062-063 WHAT WAS THE HIGHEST GRADE OR YEAR OF SCHOOL HE/SHE HAS EVER ATTENDED? (QUES. 9A)	
00=NONE (REGARDLESS OF AGE).....	4,351
21-28=ELEMENTARY GRADES (1-3).....	4,811
31-34=HIGH SCHOOL (1-4).....	7,297
41-45=COLLEGE (1-5+).....	3,719
88=BLANK, BUT APPLICABLE.....	144
POS. 064 DID HE/SHE FINISH THE GRADE YEAR? (QUES. 9B)	
1=YES.....	10,215
2=NO.....	5,471
8=BLANK, BUT APPLICABLE.....	285
BLANK.....	4,351

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 065 WHAT WAS HE/SHE DOING DURING MOST OF THE PAST 12 MONTHS? (QUES. 10A)	
1=WORKING.....	6,667
2=KEEPING HOUSE.....	3,372
3=SOMETHING ELSE.....	2,721
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	7,511
POS. 066 WHAT WAS HE/SHE DOING? (QUES. 10B)	
1=LAYOFF.....	27
2=RETIRED.....	1,179
3=STUDENT.....	966
4=ILL.....	61
5=STAYING HOME.....	96
6=LOOKING FOR WORK.....	98
7=UNABLE TO WORK.....	225
8=BLANK, BUT APPLICABLE.....	51
0=OTHER.....	69
BLANK.....	17,550
POS. 067 DID HE/SHE WORK AT A JOB OR BUSINESS AT ANY TIME DURING THE PAST THREE MONTHS? (QUES. 10C)	
1=YES.....	1,095
2=NO.....	4,998
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	14,178
POS. 068 WHEN HE/SHE WAS WORKING, DID HE/SHE USUALLY WORK FULL OR PART TIME? (QUES. 10D)	
1=FULL TIME.....	6,188
2=PART TIME.....	1,574
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	12,509

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 069 DID HE/SHE WORK AT ANY TIME LAST WEEK OR THE WEEK BEFORE NOT COUNTING WORK AROUND THE HOUSE? (QUES. 11A)	
1=YES.....	6,889
2=NO.....	873
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	12,509
POS. 070 EVEN THOUGH HE/SHE DID NOT WORK DURING THAT TIME, DOES HE/SHE HAVE A JOB OR BUSINESS? (QUES. 11B)	
1=YES.....	387
2=NO.....	5,484
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	14,400
POS. 071 WAS HE/SHE LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11C)	
1=YES.....	546
2=NO.....	5,325
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	14,400
POS. 072 WHICH-LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11D)	
1=LOOKING.....	424
2=LAYOFF.....	91
3=BOTH.....	31
8=BLANK, BUT APPLICABLE.....	51
BLANK.....	19,725
POS. 073-075 WHAT KIND OF INDUSTRY OR BUSINESS IS THIS? (QUES. 12B) (SEE DETAILED NOTE)	
017-998 (LAST DIGIT 7,8,9).....	7,701
000=BLANK, BUT APPLICABLE.....	118
BLANK.....	12,503

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 076-078 WHAT KIND OF WORK WAS HE/SHE DOING? (QUES. 12C) (SEE DETAILED NOTE)	
001-992=OCCUPATION (LAST DIGIT 0-6).....	7,690
000=BLANK, BUT APPLICABLE.....	129
BLANK.....	12,503
POS. 079 WAS HE/SHE AN EMPLOYEE OF A PRIVATE COMPANY, BUSINESS, OR INDIVIDUAL FOR WAGES, SALARY, OR COMMISSION? (QUES. 12E)	
1=PRIVATE.....	5,361
2=A FEDERAL GOVT EMPLOYEE.....	277
3=A STATE GOVT EMPLOYEE.....	443
4=A LOCAL GOVT EMPLOYEE.....	647
5=INCORPORATED-OWN.....	139
6=SELF EMPLOYED (OR FARM).....	775
7=WORKING WITHOUT PAY IN FAMILY BUSINESS OR FARM.....	61
8=NEVER WORKED.....	38
0=BLANK, BUT APPLICABLE.....	78
BLANK.....	12,503
POS. 080 DID HE/SHE EVER SERVE IN THE ARMED FORCES OF THE UNITED STATES? (QUES. 13A)	
1=YES.....	2,243
2=NO.....	10,336
8=BLANK, BUT APPLICABLE.....	232
BLANK.....	7,511
POS. 081 WHEN DID HE/SHE SERVE? (QUES. 13B)	
1=VIETNAM.....	551
2=KOREAN WAR.....	283
3=WORLD WAR II.....	1,101
4=WORLD WAR I.....	3
5=POST VIETNAM.....	10
6=OTHER SERVICE.....	271
8=BLANK, BUT APPLICABLE.....	232
9=DO NO KNOW.....	24
BLANK.....	17,847
POS. 082-090 UNUSED POSITIONS	

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
<u>c. HOUSEHOLD DATA IN POSITIONS 091-212</u>	
POS. 091 HOW MANY ROOMS ARE IN THIS...? COUNT THE KITCHEN, BUT NOT THE BATHROOM. (QUES. 14A)	
1-8 ROOMS.....	18,954
9-9 OR MORE ROOMS.....	1,368
POS. 092 HOW MANY BEDROOMS ARE IN THIS...? (QUES. 14B)	
0-7 BEDROOMS - MORE THAN 7 BEDROOMS CODED AS 7.....	20,322
POS. 093 DO YOU HAVE COMPLETE KITCHEN FACILITIES IN YOUR LIVING QUARTERS, THAT IS, A KITCHEN SINK WITH PIPED WATER, A REFRIGERATOR AND A RANGE OR COOKSTOVE? ASKED ONLY OF UNRELATED HOUSEHOLD MEMBERS. (QUES. 14C)	
1=YES.....	143
2=NO.....	198
BLANK.....	19,981
POS. 094 DO YOU (HAVE/HAVE ACCESS TO) COMPLETE KITCHEN FACILITIES IN THIS HOUSE, THAT IS, A KITHCEN SINK WITH PIPED WATER, A REFRIGERATOR AND A RANGE OR COOKSTOVE? (QUES. 15A)	
1=YES.....	19,817
2=NO.....	287
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	143
POS. 095 DO YOU (HAVE/HAVE ACCESS TO) A RANGE OR COOKSTOVE? (QUES. 15B)	
1=YES.....	178
2=NO.....	109
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	19,960

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 096 DO YOU (HAVE/HAVE ACCESS TO) A REFRIGERATOR? (QUES. 15B)	
1=YES.....	203
2=NO.....	84
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	19,960
POS. 097 DO YOU (HAVE/HAVE ACCESS TO) A SINK WITH PIPED WATER? (QUES. 15B)	
1=YES.....	102
2=NO.....	185
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	19,960
POS. 098 IS THERE PIPED WATER IN THIS HOUSE (THESE LIVING QUARTERS)? (QUES. 15C)	
1=YES.....	25
2=NO.....	160
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	20,062
POS. 099 IS THERE BOTH HOT AND COLD WATER? (QUES. 15D)	
1=YES.....	117
2=NO.....	10
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	20,120
POS. 100 ARE THESE KITCHEN FACILITIES USED BY ANYONE NOT LIVING IN THIS HOUSEHOLD? (QUES. 15E)	
1+YES.....	315
2=NO.....	19,502
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	430

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 101-102 WHAT IS THE MAIN TYPE OF HEATING SYSTEM YOU HAVE? (QUES. 16)	
11=STEAM OR HOT WATER SYSTEM.....	3,138
12=CENTRAL WARM AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOM OR CENTRAL HEAT PUMP (FORCED AIR).....	9,887
13=BUILT IN ELECTRIC UNITS (PERMANENTLY INSTALLED IN WALL, CEILING, OR BASEBOARD).....	1,204
14=FLOOR, WALL OR PIPELESS FURNACE.....	1,726
15=CIRCULATING, RADIANT OR ROOM HEATERS, WITH FLUE OR VENT, BURNING GAS, OIL OR KEROSENE.....	1,722
16=CIRCULATING, RADIANT, OR ROOM HEATERS (NOT PORTABLE) WITHOUT FLUE OR VENT BURNING GAS, OIL, OR KEROSENE....	814
17=FIREPLACE OR STOVES BURNING COAL, WOOD, OR COKE.....	717
18=PORTABLE ROOM HEATERS OF ANY KIND.....	423
19=SOME OTHER TYPE.....	257
20=NONE, UNIT IS NOT HEATED.....	299
88=BLANK, BUT APPLICABLE.....	135
POS. 103 DO YOU HAVE AIR CONDITIONING? (QUES. 17)	
1=YES, INDIVIDUAL ROOM UNIT.....	6,032
2=YES, CENTRAL AIR CONDITIONING.....	3,646
3=NO.....	10,549
8=BLANK, BUT APPLICABLE.....	95
POS. 104 HOW MANY MOTOR VEHICLES ARE OWNED OR REGULARLY USED FOR TRANSPORTATION BY MEMBERS OF YOUR FAMILY? (QUES. 18)	
0=NONE.....	2,256
1-8 VEHICLES (MORE THAN 8 CODED AS 8)	17,917
9=BLANK, BUT APPLICABLE.....	149
POS. 105 IS ANY LANGUAGE OTHER THAN ENGLISH FREQUENTLY SPOKEN BY FAMILY MEMBERS LIVING HERE? (QUES. 19A)	
1=YES.....	2,185
2=NO.....	18,045
8=BLANK, BUT APPLICABLE.....	92

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 106 WHAT LANGUAGE(S)? (QUES. 19B)	
0=GERMAN.....	89
1=ITALIAN.....	120
2=FRENCH.....	250
3=POLISH.....	55
4=RUSSIAN.....	19
5=SPANISH.....	1,168
6=CHINESE.....	42
7=OTHER LANGUAGE.....	428
8=BLANK, BUT APPLICABLE.....	106
9=NOT APPLICABLE.....	18,045
POS. 107-108 WHICH OF THESE INCOME GROUPS REPRESENTS YOUR TOTAL COMBINED FAMILY INCOME FOR THE PAST 12 MONTHS? (QUES. 20) (SEE DETAILED NOTE)	
11= UNDER \$ 1,000.....	235
12=\$ 1,000-\$ 1,999.....	398
13=\$ 2,000-\$ 2,999.....	738
14=\$ 3,000-\$ 3,999.....	869
15=\$ 4,000-\$ 4,999.....	828
16=\$ 5,000-\$ 5,999.....	733
17=\$ 6,000-\$ 6,999.....	595
18=\$ 7,000-\$ 9,999.....	3,630
19=\$10,000-\$14,999.....	4,034
20=\$15,000-\$19,999.....	3,046
21=\$20,000-\$24,999.....	2,071
22=\$25,000 AND OVER.....	2,394
88=BLANK, BUT APPLICABLE.....	751
POS. 109-112 DURING THE PAST 12 MONTHS, HOW MUCH MONEY DID YOU AND ALL MEMBERS OF YOUR FAMILY RECEIVE IN WAGES OR SALARIES BEFORE DEDUCTIONS? (QUES. 21)	
0000-6999=AMOUNT.....	4,200
8888=BLANK, BUT APPLICABLE.....	947
BLANK.....	15,175

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TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
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POS. 113 SOCIAL SECURITY OR RAILROAD RETIREMENT? (QUES. 22A)	
1=YES.....	1,750
2=NO.....	2,742
8=BLANK, BUT APPLICABLE.....	655
BLANK.....	15,175
 POS. 114 UNUSED POSITION	
 POS. 115-118 IF YES, HOW MUCH?	
0038-6928=AMOUNT.....	1,664
8888=BLANK, BUT APPLICABLE.....	741
BLANK.....	17,917
 POS. 119 WELFARE PAYMENTS OR OTHER PUBLIC ASSISTANCE? (QUES. 22B)	
1=YES.....	1,311
2=NO.....	3,187
8=BLANK, BUT APPLICABLE.....	649
BLANK.....	15,175
 POS. 120 UNUSED POSITION	
 POS. 121-124 IF YES, HOW MUCH?	
0012-6800=AMOUNT.....	1,269
8888=BLANK, BUT APPLICABLE.....	691
BLANK.....	18,362
 POS. 125 UNEMPLOYMENT COMPENSATION OR WORKMEN'S COMPENSATION (QUES. 22C)	
1=YES.....	347
2=NO.....	4,152
8=BLANK, BUT APPLICABLE.....	648
BLANK.....	15,175

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 126 UNUSED POSITION	
POS. 127-130 IF YES, HOW MUCH?	
0015-5640=AMOUNT.....	306
8888=BLANK, BUT APPLICABLE.....	689
BLANK.....	19,327
POS. 131 GOVERNMENT EMPLOYEE PENSION OR PRIVATE PENSIONS? (QUES. 22D)	
1=YES.....	256
2=NO.....	4,240
8=BLANK, BUT APPLICABLE.....	651
BLANK.....	15,175
POS. 132 UNUSED POSITION	
POS. 133-136 IF YES, HOW MUCH?	
0036-6000=AMOUNT.....	234
8888=BLANK, BUT APPLICABLE.....	673
BLANK.....	19,415
POS. 137 DIVIDENDS, INTEREST, OR RENT? (QUES. 22E)	
1=YES.....	464
2=NO.....	4,026
8=BLANK, BUT APPLICABLE.....	657
BLANK.....	15,175
POS. 138 UNUSED POSITION	
POS. 139-142 IF YES, HOW MUCH?	
0001-5200=AMOUNT.....	427
8888=BLANK, BUT APPLICABLE.....	694
BLANK.....	19,201

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TAPE POSITION, ITEM DESCRIPTION, AND CODES		CONTROL
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		COUNTS
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POS. 143	NET INCOME FROM THEIR OWN NONFARM BUSINESS, PROFESSIONAL PRACTICE, OR PARTNERSHIP? (QUES. 22F)	
	1=YES.....	157
	2=NO.....	4,317
	3=LOSS.....	18
	8=BLANK, BUT APPLICABLE.....	655
	BLANK.....	15,175
POS. 144	UNUSED POSITION	
POS. 145-148	IF YES, HOW MUCH?	
	0001-6800=AMOUNT.....	139
	8888=BLANK, BUT APPLICABLE.....	691
	BLANK.....	19,492
POS. 149	NET INCOME FROM A FARM? (QUES. 22G)	
	1=YES.....	120
	2=NO.....	4,342
	3=LOSS.....	29
	8=BLANK, BUT APPLICABLE.....	656
	BLANK.....	15,175
POS. 150	UNUSED POSITION	
POS. 151-154	IF YES, HOW MUCH?	
	0000-6500=AMOUNT.....	117
	8888=BLANK, BUT APPLICABLE.....	688
	BLANK.....	19,517
POS. 155	VETERAN'S PAYMENTS? (QUES. 22H)	
	1=YES.....	245
	2=NO.....	4,251
	8=BLANK, BUT APPLICABLE.....	651
	BLANK.....	15,175

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 156 UNUSED POSITION	
POS. 157-160 IF YES, HOW MUCH?	
0060-6000=AMOUNT.....	231
8888=BLANK, BUT APPLICABLE.....	665
BLANK.....	19,426
POS. 161 ALIMONY, CHILD SUPPORT, OR CONTRIBUTIONS FROM PERSONS NOT LIVING IN HOUSEHOLD? (QUES. 22I)	
1=YES.....	312
2=NO.....	4,182
8=BLANK, BUT APPLICABLE.....	653
BLANK.....	15,175
POS. 162 UNUSED POSITION	
POS. 163-166 IF YES, HOW MUCH?	
0020-6900=AMOUNT.....	297
8888=BLANK, BUT APPLICABLE.....	668
BLANK.....	19,357
POS. 167 ANY OTHER INCOME? (QUES. 22J)	
1=YES.....	196
2=NO.....	4,299
8=BLANK, BUT APPLICABLE.....	652
BLANK.....	15,175
POS. 168 UNUSED POSITION	
POS. 169-172 IF YES, HOW MUCH?	
0003-6403=AMOUNT.....	188
8888=BLANK, BUT APPLICABLE.....	660
BLANK.....	19,474

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 173-176 TOTAL AMOUNT (QUES. 21 & 22)	
0000-6999=AMOUNT.....	4,036
8888=BLANK, BUT APPLICABLE.....	1,111
BLANK.....	15,175
POS. 177 CHECK ITEM B	
2=FOOD STAMPS AVAILABLE.....	20,080
4=BOTH FOOD STAMPS AND COMMODITIES.....	242
POS. 178 ARE YOU CERTIFIED TO PARTICIPATE IN THE FOOD STAMP PROGRAM? (QUES. 23A)	
1=YES.....	2,349
2=NO.....	16,921
8=BLANK, BUT APPLICABLE.....	4
9=DON'T KNOW.....	1,048
POS. 179 ARE YOU BUYING FOOD STAMPS NOW? (QUES. 23B)	
1=YES, REGULARLY.....	1,740
2=YES, OCCASIONALLY.....	117
3=NO.....	457
8=BLANK, BUT APPLICABLE.....	39
BLANK.....	17,969
POS. 180 WHAT IS THE MAIN REASON YOU AREN'T PARTICIPATING IN THE PROGRAM? (QUES. 23C)	
1=NO NEED.....	77
2=NOT ENOUGH MONEY AT THE TIME.....	96
3=NO TRANSPORTATION.....	16
4=PRIDE.....	31
5=OTHER.....	201
8=BLANK, BUT APPLICABLE.....	75
BLANK.....	19,826

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 181 ARE YOU CERTIFIED FOR THE COMMODITY DISTRIBUTION PROGRAM? (QUES. 24A)	
1=YES.....	17
2=NO.....	215
9=DO NOT KNOW.....	10
BLANK.....	20,080
POS. 182 ARE YOU RECEIVING COMMODITY FOODS NOW FOR YOUR FAMILY? (QUES. 24B)	
1=YES, REGULARLY.....	2
2=YES, OCCASIONALLY.....	1
3=NO.....	14
BLANK.....	20,305
POS. 183 WHY AREN'T YOU PARTICIPATING IN THE PROGRAM? (QUES. 24C)	
1=NO NEED.....	4
2=NO TRANSPORTATION.....	2
3=PRIDE.....	3
4=OTHER.....	4
8=BLANK, BUT APPLICABLE.....	1
BLANK.....	20,308
POS. 184-185 CONTROL RECORD - DATE OF EXAM MONTH	
01-12.....	20,322
POS. 186-187 CONTROL RECORD - DATE OF EXAM DAY	
01-31.....	20,322
POS. 188-189 CONTROL RECORD - DATE OF EXAM YEAR	
76-80.....	20,322

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 190-191 AGE IN YEARS (AT EXAMINATION)	
01-75 YEARS.....	20,023
00-IF LESS THAN 12 MONTHS OR NON-EXAMINED.....	299
POS. 192-205 UNUSED POSITIONS	
POS. 206 RACE SEX RECODE FOR SAMPLE PERSON (SEE DETAILED NOTE FOR POS. 056)	
1=MALE, WHITE.....	8,389
2=MALE, BLACK.....	1,341
3=MALE, OTHER.....	253
4=FEMALE, WHITE.....	8,716
5=FEMALE, BLACK.....	1,422
6=FEMALE, OTHER.....	201
POS. 207 FARM, NON-FARM RECODE FOR SAMPLE PERSON (SEE DETAILED NOTE)	
1=FARM.....	1,080
2=NON-FARM.....	19,242
POS. 208 INTERVIEW STATUS	
1=INTERVIEWED.....	20,322
POS. 209 REGION (SEE DETAILED NOTE)	
1=NORTHEAST.....	4,396
2=MIDWEST.....	5,421
3=SOUTH.....	5,507
4=WEST.....	4,998
POS. 210-212 POVERTY INDEX (X.XX) (SEE DETAILED NOTE)	
001-880 AS GIVEN.....	19,569
999-UNKNOWN.....	753
POS. 213-246 UNUSED POSITIONS	

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
d. <u>HEAD OF HOUSEHOLD DATA IN POSITIONS 247-281</u>	
POS. 247-248 AGE YEARS AT INTERVIEW (QUES. 3)	
15-99 YEARS (100 OR MORE CODED AS 99).....	20,322
POS. 249-250 UNUSED POSITIONS	
POS. 251-252 DATE OF BIRTH-MONTH (QUES. 2)	
01-12 MONTH.....	20,267
88=BLANK, BUT APPLICABLE.....	55
POS. 253-254 DATE OF BIRTH-YEAR	
00-99 YEAR	20,322
POS. 255 SEX (QUES. 4)	
1=MALE.....	16,372
2=FEMALE.....	3,950
POS. 256 RACE (QUES. 5) (SEE DETAILED NOTE FOR POS. 056)	
1=WHITE.....	17,131
2=BLACK.....	2,748
3=OTHER.....	443
POS. 257-258 IN WHAT STATE WAS HE/SHE BORN? (QUES. 6) (SEE DETAILED NOTE FOR POS. 057-058)	
01-97.....	20,150
88=BLANK, BUT APPLICABLE.....	172

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 259 IS HE/SHE NOW MARRIED, WIDOWED, DIVORCED, SEPARATED, OR NEVER MARRIED? (QUES. 7)	
1=UNDER 17.....	3
2=MARRIED.....	15,273
3=WIDOWED.....	1,492
4=DIVORCED.....	1,248
5=SEPARATED.....	828
6=NEVER MARRIED.....	1,430
8=BLANK, BUT APPLICABLE.....	48
POS. 260-261 NATIONAL ORIGIN OR ANCESTRY? (QUES. 8)	
01=COUNTRIES OF CENTRAL OR SOUTH AMERICA.....	126
02=CHICANO.....	46
03=CUBAN.....	93
04=MEXICAN.....	287
05=MEXICANO.....	104
06=MEXICAN-AMERICAN.....	342
07=PUERTO RICAN.....	205
08=OTHER SPANISH.....	86
09=OTHER EUROPEAN, SUCH AS GERMAN,FRENCH,ENGLISH,IRISH...	14,324
10=BLACK, NEGRO OR AFRO-AMERICAN.....	2,640
11=AMERICAN INDIAN OR ALASKAN NATIVE.....	329
12=ASIAN OR PACIFIC ISLANDER SUCH AS CHINESE,JAPANESE, KOREAN,PHILIPPINO,.....	378
13=ANOTHER GROUP NOT LISTED.....	958
88=BLANK, BUT APPLICABLE.....	404
POS. 262-263 WHAT WAS THE HIGHEST GRADE OR YEAR OF SCHOOL HE/SHE HAS EVER ATTENDED (QUES. 9A)	
00=NONE (REGARDLESS OF AGE).....	153
21-28=ELEMENTARY GRADES (1-8).....	3,955
31-34=HIGH SCHOOL (1-4).....	9,834
41-45=COLLEGE (1-5+).....	6,175
88=BLANK, BUT APPLICABLE.....	205
POS. 264 DID HE/SHE FINISH THE GRADE YEAR? (QUES. 9B)	
1=YES.....	15,079
2=NO.....	4,669
8=BLANK, BUT APPLICABLE.....	421
BLANK.....	153

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 265 WHAT WAS HE/SHE DOING MOST OF THE PAST 12 MONTHS? (QUES. 10A)	
1=WORKING.....	14,684
2=KEEPING HOUSE.....	1,891
3=SOMETHING ELSE.....	3,666
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	3
POS. 266 WHAT WAS HE/SHE DOING? (QUES. 10B)	
1=LAYOFF.....	94
2=RETIRED.....	2,160
3=STUDENT.....	476
4=ILL.....	147
5=STAYING HOME.....	110
6=LOOKING FOR WORK.....	143
7=UNABLE TO WORK.....	445
8=BLANK, BUT APPLICABLE.....	78
0=OTHER.....	91
BLANK.....	16,578
POS. 267 DID HE/SHE WORK AT A JOB OR BUSINESS DURING THE PAST THREE MONTHS? (QUES. 10C)	
1=YES.....	779
2=NO.....	4,778
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	14,687
POS. 268 WHEN HE/SHE WAS WORKING, DID HE/SHE USUALLY WORK FULL OR PART TIME? (QUES. 10D)	
1=FULL TIME.....	14,166
2=PART TIME.....	1,297
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	4,781

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
POS. 269 DID HE/SHE WORK AT ANY TIME LAST WEEK OR THE WEEK BEFORE NOT COUNTING WORK AROUND THE HOUSE? (QUES. 11A)	
1=YES.....	14,317
2=NO.....	1,146
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	4,781
POS. 270 EVEN THOUGH HE/SHE DID NOT WORK DURING THAT TIME DOES HE/SHE HAVE A JOB OR BUSINESS? (QUES. 11B)	
1=YES.....	621
2=NO.....	5,303
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	14,320
POS. 271 WAS HE/SHE LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11C)	
1=YES.....	761
2=-NO.....	5,163
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	14,320
POS. 272 WHICH-LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11D)	
1=LOOKING.....	535
2=LAYOFF.....	170
3=BOTH.....	56
8=BLANK, BUT APPLICABLE.....	78
BLANK.....	19,483
POS. 273-275 WHAT KIND OF INDUSTRY OR BUSINESS IS THIS? (QUES. 12B) (SEE DETAILED NOTE)	
017-998 (LAST DIGIT 7,8,9).....	15,322
000=BLANK, BUT APPLICABLE.....	366
BLANK.....	4,634

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

POS. 276-278 WHAT KIND OF WORK WAS HE/SHE DOING? (QUES. 12C) (SEE DETAILED NOTE)	
001-992=OCCUPATION (LAST DIGIT 0-6).....	15,313
000=BLANK, BUT APPLICABLE.....	375
BLANK.....	4,634
POS. 279 WAS HE/SHE AN EMPLOYEE OF A PRIVATE COMPANY, BUSINESS, OR INDIVIDUAL FOR WAGES, SALARY, OR COMMISSION? (QUES. 12E)	
1=PRIVATE.....	10,773
2=A FEDERAL GOVT EMPLOYEE.....	788
3=A STATE GOVT EMPLOYEE.....	741
4=A LOCAL GOVT EMPLOYEE.....	1,062
5=INCORPORATED-OWN.....	388
6=SELF-EMPLOYED (OR FARM).....	1,758
7=WORKING WITHOUT PAY IN FAMILY BUSINESS OR FARM.....	10
8=NEVER WORKED.....	19
0=BLANK, BUT APPLICABLE.....	149
BLANK.....	4,634
POS. 280 DID HE/SHE EVER SERVE IN THE ARMED FORCES OF THE UNITED STATES? (QUES. 13A)	
1=YES.....	7,205
2=NO.....	12,896
8=BLANK, BUT APPLICABLE.....	218
BLANK.....	3
POS. 281 WHEN DID HE/SHE SERVE? (QUES. 13B)	
1=VIETNAM.....	2,135
2=KOREAN WAR.....	1,221
3=WORLD WAR II.....	2,429
4=WORLD WAR I.....	47
5=POST VIETNAM.....	220
6=OTHER SERVICE.....	1,057
8=BLANK, BUT APPLICABLE.....	218
9=DO NOT KNOW.....	96
BLANK.....	12,899

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS
2. SAMPLE WEIGHT POSITIONS 282-327	
(SEE DETAILED NOTE FOR POS. 282-327)	
POS. 282-287 EXAMINED FINAL WEIGHT	
001218-079634.....	20,322
POS. 288-293 MEDICAL HISTORY INTERVIEW FINAL WEIGHT	
001171-071969.....	20,322
POS. 294-299 GLUCOSE TOLERANCE TEST FINAL EXAMINED WEIGHT	
003502-084477.....	5,903
000000.....	14,419
POS. 300-305 LEAD FINAL EXAMINED WEIGHT	
001218-084115.....	12,288
000000.....	8,034
POS. 306-311 CARBOXYHEMOGLOBIN FINAL EXAMINED WEIGHT	
002546-110759.....	9,365
000000.....	10,957
POS. 312-317 BILE ACIDS FINAL EXAMINED WEIGHT	
003519-087638.....	4,089
000000.....	16,233
POS. 318-323 UNUSED POSITIONS	

----- TAPE POSITION, ITEM DESCRIPTION, AND CODES -----	----- CONTROL COUNTS -----
POS. 324-325 STRATA	
01-32.....	20,322
POS. 326 PSEUDO PRIMARY SAMPLING UNITS	
1 or 2.....	20,322
POS. 327 POVERTY/NONPOVERTY SEGMENTS (SEE DETAILED NOTE)	
1=NON-POVERTY.....	9,689
2=POVERTY.....	10,633

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1990)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
328-333	6	<u>Serum Ferritin Final Examined Weight</u> 001977 - 351679 000000	5,833 14,489	
334-339	6	<u>Folates, Vitamin B12 and Differential Counts</u> <u>Final Examined Weight</u> 001606 - 579093 000000	3,909 16,413	
340-350	11	<u>Unused positions</u>		

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
351-354	4	CATALOG NUMBER: 5411	20,322	
355	1	<u>Specimen Collection</u> 1 - Venipuncture 2 - Capillary 8 - Blank but applicable	18,693 292 1,337	See Detailed Notes
356	1	<u>Session</u> 1 - AM 2 - PM 3 - Night 8 - Unknown	10,238 5,584 3,163 1,337	
357-359	3	<u>Hematocrit (Percent)</u> (xx.x - decimal not shown on tape) 145 - 617 - As given 888 - Blank but applicable	18,981 1,341	See Detailed Notes
360	1	<u>Hematocrit Imputation Code</u> 1 - Not Imputed 2 - Imputed	20,292 30	See Detailed Notes

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
361-363	3	<u>Hemoglobin (grams per deciliter) (g/dL)</u> (xx.x - decimal not shown on tape) 037 - 202 - As given 888 - Blank but applicable	18,981 1,341	See Detailed Notes
364	1	<u>Hemoglobin Imputation Code</u> 1 - Not imputed 2 - Imputed	19,787 535	See Detailed Notes
365-367	3	<u>Red Blood Cell Count (x10¹²/liter)</u> (x.xx - decimal not shown on tape) 225 - 798 - As given 888 - Blank but applicable	18,832 1,490	See Detailed Notes
368-370	3	<u>White Blood Cell Count (x10⁹/liter)</u> (xx.x - decimal not shown on tape) 021 - 735 - As given 888 - Blank but applicable	18,849 1,473	See Detailed Notes

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
371-374	4	<u>Mean Corpuscular Volume (femtoliters)(fL)</u> (xxx.x - decimal not shown on tape) 0507 - 1263 - As given 8888 - Blank but applicable	18,801 1,521	Computer Generated
375-377	3	<u>Mean Corpuscular Hemoglobin (picograms)(pg)</u> (xx.x - decimal not shown on tape) 124 - 435 - As given 888 - Blank but applicable	18,322 2,000	Computer Generated
378-380	3	<u>Mean Corpuscular Hemoglobin Concentration (g/dL)</u> (xx.x - decimal not shown on tape) 237 - 446 - As given 888 - Blank but applicable	18,416 1,906	Computer Generated
381-383	3	<u>Serum Iron (micrograms per deciliter)(ug/dL)</u> (xxx - decimal not shown on tape) 007 - 343 - As given 888 - Blank but applicable	17,562 2,760	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
384-386	3	Serum Total Iron - Binding Capacity (ug/dL) (xxx. - decimal not shown on tape) 157 - 792 - As given 888 - Blank but applicable	15,693 4,629	
387-389	3	Transferrin Saturation (Percent) (xx.x - decimal not shown on tape) 031 - 943 - As given 000 - Blank but applicable	15,661 4,661	Computer Generated
390-392	3	Serum Albumin (g/dL) (xx.x - decimal not shown on tape) 020 - 059 - As given 888 - Blank but applicable 999 - Not applicable	15,457 3,092 1,773	Ages 3-74 years
393-395	3	Serum Vitamin C (milligrams per deciliter)(mg/dL) (xx.x - decimal not shown on tape) 001 - 181 - As given 888 - Blank but applicable 999 - Not applicable	15,796 2,753 1,773	Ages 3-74 years
396-398	3	Serum Zinc (ug/dL) (xxx. - decimal not shown on tape) 042 - 240 - As given 888 - Blank but applicable 999 - Not applicable	14,770 3,779 1,773	Ages 3-74 years

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
399-401	3	<u>Serum Copper (ug/dL)</u> (xxx. - decimal not shown on tape) 011 - 346 - As given 888 - Blank but applicable 999 - Not applicable	14,649 3,900 1,773	Ages 3-74 years
402-404	3	<u>Serum Vitamin A (ug/dL)</u> (xxx. - decimal not shown on tape) 003 - 208 - As given 888 - Blank but applicable 999 - Not applicable	2,508 1,562 16,252	Ages 3-11 years
405-408	4	<u>Erythrocyte Protoporphyrin (ug/dL RBC)</u> (xxxx. - decimal not shown on tape) 0020 - 1307 - As given 8888 - Blank but applicable	18,228 2,094	
409-411	3	<u>Lead (ug/dL)</u> (xxx. - decimal not shown on tape) 002 - 116 - As given 888 - Blank but applicable 999 - Not applicable	10,049 2,239 8,034	Important: Special Subsample See Detailed Notes Use sample weight in positions 300-305
412-415	4	<u>Carboxyhemoglobin (percent)</u> (xxx.xx - decimal not shown on tape) 0000 - 1729 - As given 9999 - Not applicable	9,365 10,957	Important: Special Subsample See Detailed Notes Use sample weight in in positions 306-311

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
416-419	4	<u>Methemoglobin (percent)</u> (xx.xx - decimal not shown on tape) 0000 - 1448 - As given 9999 - Not applicable	 9,365 10,957	<u>Important:</u> Special Subsample See Detailed Notes Use sample weight in positions 306-311
420	1	<u>Carboxyhemoglobin and Methemoglobin</u> <u>Imputation Code</u> 0 - Imputed 1 - Not imputed 9 - Not applicable	 956 8,409 10,957	See Detailed Notes

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
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IMPORTANT

The blood and urine assessments from tape positions 421-530 are not available in Version 1 of this data tape. Each one of these assessments had some type of data quality issue that needed to be resolved before the data could be released for general use. These issues ranged from laboratory quality control concerns to large amounts of missing data. Many of these assessments have special sample weights that need to be used to analyze the data.

The user is strongly encouraged to read the detailed notes for each assessment. The interpretation of the results for many of these blood and urine variables should be made with caution. Any analysis should include a complete description of the laboratory methodology and an in-depth study of nonresponse bias.

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SERUM LIPIDS, LIPOPROTEIN AND RELATED DATA

421-423	3	<u>Serum Cholesterol (milligrams per deciliter) (mg/dL)</u> (XXX. - decimal not shown on tape)		See Detailed Notes Ages 20-74 years
		080 - 828 - As given	11,864	
		999 - Not applicable	8,458	
424	1	<u>Imputation Code</u>		
		1 - imputed	272	
		2 - not imputed	11,592	
		9 - Not applicable	8,458	
425	1	<u>Birth Control Pill Usage</u>		
		Have you taken birth control pills in the last six months and are taking them now?		
		1 - yes	533	See Detailed Notes
		2 - no	5,727	
		9 - Not applicable	14,052	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)
HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
426-429	4	<u>Serum Triglyceride (milligrams per deciliter)(mg/dL)</u> (XXXX. - decimal not shown on tape) 0016 - 2604 - As given 8888 - Blank but applicable 9999 - Not applicable	5,732 171 14,419	Important: Special Subsample See Detailed Notes Use sample weight in positions 294-299
430-431	2	<u>Fasting Time (Hours)</u> 00 - 48 - As given 88 - Blank but applicable 99 - Not applicable	4,600 1,303 14,419	See Detailed Notes
432	1	<u>Fasting Time Recode</u> 1 = 00-09 Hours 2 = 10-11 Hours 3 = 12+ Hours 4 = Blank but applicable 9 = Not applicable	373 1,423 2,804 1,303 14,419	
433	1	<u>Session of Examination</u> 1 - Morning 2 - Afternoon 3 - Evening 8 - Blank but applicable 9 - Not applicable	4,881 555 398 69 14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)
HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE ON NOTES
434-436	3	HDL Cholesterol (milligrams per deciliter) (mg/dL) (XXX. - decimal not shown on tape)		
		015 - 187 - As given	9,797	See Detailed Notes Ages 20-74 years
		888 - Blank but applicable	2,067	
		999 - Not applicable	8,458	
437	1	HDL Serum		
		1 - Frozen	9,225	
		2 - Refrozen	572	
		8 - Blank but applicable	2,067	
		9 - Not applicable	8,458	
438-439	2	Strata - HDL Cholesterol		
		01 - 31 - As given	11,490	See Detailed Notes
		88 - Blank but applicable	374	
		99 - Not applicable	8,458	
440-441	2	ORAL GLUCOSE TOLERANCE TEST		
		<u>How many hours ago did you have your last meal?</u>		IMPORTANT: Special Subsample See Detailed Notes Use sample weight in positions 294-299
		01 - 48 - As given	4,639	
		88 - Blank but applicable	1,264	
		99 - Not applicable	14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE ON NOTES
442	1	<u>Have you had anything to eat or drink, except water, since that meal?</u> 1 - Yes 2 - No 8 - Blank but applicable 9 - Not applicable	2,572 2,047 1,204 14,419	
443-444	2	<u>How many hours ago did you have it?</u> 00 - 17 - As given 88 - Blank but applicable 99 - Not applicable	2,523 1,333 16,466	
445-446	2	<u>Number of hours fasted</u> 00 - 48 - As given 87 - Blank 88 - Blank but applicable 89 - Blank 99 - Not applicable	4,569 48 1,256 30 14,419	Computer generated

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE ON NOTES
447	1	<u>Amount of time between glucola given and one-hour specimen drawn</u>		Computer generated
		1 - Under 50 minutes	3	
		2 - 50 to 54 minutes	16	
		3 - 55 to 59 minutes	2,015	
		4 - 60 minutes	1,140	
		5 - 61 to 65 minutes	1,060	
		6 - 66 to 70 minutes	58	
		7 - 71 to 75 minutes	14	
		8 - Over 75 minutes	9	
		9 - Blank but applicable	16,007	
448-451	4	<u>Time glucola given</u>		
		0805 - 1115 - As given	4,342	
		8888 - Blank but applicable	1,561	
		9999 - Not applicable	14,419	
452	1	<u>Imputed or unknown time between glucola given and one-hour specimen drawn</u>		Computer generated
		3 - Time imputed	12	
		8 - Not Calculated	63	
		9 - Not applicable	20,247	
453-456	4	<u>Time one-hour specimen drawn</u>		
		0906 - 1218 - As given	4,316	
		8888 - Blank, but applicable	1,587	
		9999 - Not applicable	14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE ON NOTES
457	1	<u>Imputed or unknown time between gluco</u> <u>given and two-hour specimen drawn</u>		Computer generated
		3 - Time imputed	36	
		8 - Not calculated	62	
		9 - Not applicable	20,224	
458	1	<u>Amount of time between gluco</u> <u>given and two-hour specimen drawn</u>		Computer generated
		1 - Under 110 minutes	3	
		2 - 110 - 114 minutes	33	
		3 - 115 - 119 minutes	2,465	
		4 - 120 minutes	938	
		5 - 121 - 125 minutes	761	
		6 - 126 - 130 minutes	54	
		7 - 131 - 135 minutes	12	
		8 - Over 135 minutes	12	
		9 - Not Applicable	16,044	
459-462	4	<u>Time two-hour specimen drawn</u>		
		1004 - 1310 - As given	4,279	
		8888 - Blank, but applicable	1,624	
		9999 - Not applicable	14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
463	1	<u>Partial data - reason test incomplete</u>		Computer generated
		1 - Sample person became ill	12	
		3 - Technical error	75	
		6 - Sample person refused to continue	26	
		7 - Venipuncture unsuccessful	11	
		9 - Not applicable	20,198	
464	1	<u>Was test satisfactory?</u>		
		0 - Satisfactory test	3,797	
		1 - Illness	41	
		2 - Diabetic on insulin	75	
		3 - Technical error	283	
		4 - Examined in afternoon	921	
		5 - Fasting criteria not met	460	
		6 - Refusal	191	
		7 - Venipuncture unsuccessful	11	
		8 - Partial data	124	
		9 - Not applicable	14,419	
		 <u>ORAL GLUCOSE CHALLENGE TEST RESULTS</u>		
465	1	<u>Result classification</u>		
		1 - Normal result	3,403	
		2 - Impaired glucose tolerance	238	
		3 - Diabetes mellitus	232	
		4 - Unclassifiable	16	
		8- Test missing	2,014	
		9 - Not applicable	14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
(NHANES II - 1976-1980)
HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
466-468	3	<u>Fasting plasma glucose (milligrams per deciliter) (mg/dL)</u> (xxx. - decimal not shown on tape)		See Detailed Notes Use sample weight in positions 294-299
		031 - 400 - As given	3,917	
		777 - Unacceptable data	343	
		888 - Blank but applicable	1,643	
		999 - Not applicable	14,419	
469-471	3	<u>One-hour plasma glucose (milligrams per deciliter) (mg/dL)</u> (xxx. - decimal not shown on tape)		See Detailed Notes Use sample weight in positions 294-299
		028 - 617 - As given	3,868	
		777 - Unacceptable data	352	
		888 - Blank but applicable	1,683	
		999 - Not applicable	14,419	
472-474	3	<u>Two-hour plasma glucose (milligrams per deciliter) (mg/dL)</u> (xxx. - decimal not shown on tape)		See Detailed Notes Use sample weight in positions 294-299
		026 - 703 - As given	3,818	
		777 - Unacceptable data	351	
		888 - Blank but applicable	1,734	
		999 - Not applicable	14,419	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
		FERRITIN, FOLATES, VITAMIN B ₁₂ AND DIFFERENTIAL COUNTS		Important: Read Detailed Notes for these fields before beginning any analysis of the data
475-478	4	<u>Serum Ferritin nanogram per milliliter (ng/mL)</u> (xxxx. - decimal not shown on tape) 0001 - 1596 - As given 8888 - Blank but applicable 9999 - Not applicable	5,157 676 14,489	Important: Special Subsample See Detailed Notes Use sample weight in positions 328-333
479-482	4	<u>RBC Folate nanogram per milliliter of Red Blood Cell (ng/mL) -</u> (xxxx. - decimal not shown on tape) 0025 - 3089 - As given 8888 - Blank but applicable 9999 - Not applicable	2,425 1,484 16,413	Important: Special Subsample See Detailed Notes Use sample weight in positions 334-339
483-486	4	<u>Serum Folate nanogram per milliliter of serum (ng/mL)</u> (xxx.x - decimal not shown on tape) 0002 - 0795 - As given 8888 - Blank but applicable 9999 - Not applicable	2,910 999 16,413	Important: Special Subsample See Detailed Notes Use sample weight in positions 334-339

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
487-490	4	<u>Serum B12 picograms per milliliter (pg/mL)</u> (xxxx. - decimal not shown on tape) 0054 - 5553 - As given 8888 - Blank but applicable 9999 - Not applicable	2,739 1,170 16,413	Important: Special Subsample See Detailed Notes Use sample weight in positions 334-339
491-492	2	DIFFERENTIAL COUNTS <u>Blast Forms (percent of 100 cells)</u> 00 03 88 - Blank but applicable 99 - Not applicable	3,698 1 210 16,413	Important: Special Subsample See Detailed Notes Use sample weight in positions 334-339
493-494	2	<u>Promyelocytes (percent of 100 cells)</u> 00 01 88 - Blank but applicable 99 - Not Applicable	3,698 1 210 16,413	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
495-496	2	<u>Myelocytes (percent of 100 cells)</u>		
		00	3,683	
		01 - 04	16	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
497-498	2	<u>Metamyelocytes (percent of 100 cells)</u>		
		00	3,651	
		01 - 05	48	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
499-500	2	<u>Banded Neutrophils (percent of 100 cells)</u>		
		00	2,116	
		01 - 25	1,583	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
501-502	2	<u>Segmented Neutrophils (percent of 100 cells)</u>		
		00	49	
		01 - 87	3,650	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
503-504	2	<u>Eosinophils (percent of 100 cells)</u>		
		00	733	
		01 - 51	2,966	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
505-506	2	<u>Basophils (percent of 100 cells)</u>		
		00	2,279	
		01 - 06	1,420	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
507-508	2	<u>Lymphocytes (percent of 100 cells)</u>		
		00	49	
		05 - 86, 89 - 95	3,650	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	
509-510	2	<u>Monocytes (percent of 100 cells)</u>		
		00	115	
		01 - 29	3,584	
		88 - Blank but applicable	210	
		99 - Not applicable	16,413	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
511-513	3	<u>Serum Creatinine (milligrams per deciliter)(mg/dL)</u> (xx.x decimal not shown on tape) 003 - 169 - As given 888 - Blank but applicable 999 - Not applicable	10,461 4,018 5,843	Important: Special Subsample See Detailed Notes Ages 12-74 years
		URINE MULTISTIX TEST RESULTS		See Detailed Notes Ages 6-74 years
514	1	<u>Urine pH Number</u> 5 - 9 - As given 1 - Blank but applicable 2 - Not applicable	15,516 688 4,118	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
515	1	<u>Protein</u>		
		0 - Negative	14,925	
		1 - 30+	257	
		2 - 100++	133	
		3 - 300+++	82	
		4 - 1000++++	20	
		5 - Trace	100	
		8 - Blank but applicable	687	
		9 - Not applicable	4,118	
516	1	<u>Glucose</u>		
		0 - Negative	15,248	
		1 - Light+	29	
		2 - Medium++	32	
		3 - Dark+++	69	
		4 - Very dark++++	101	
		5 - Trace	38	
		8 - Blank but applicable	687	
		9 - Not applicable	4,118	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
517	1	<u>KETONES</u>		
		0 - Negative	15,293	
		1 - Small+	120	
		2 - Moderate++	55	
		3 - Large+++	25	
		4 - Very large++++	5	
		5 - Trace	19	
		8 - Blank but applicable	687	
		9 - Not applicable	4,118	
518	1	<u>Bilirubin</u>		
		0 - Negative	15,479	
		1 - Small+	21	
		2 - Moderate++	8	
		3 - Large+++	2	
		4 - Very large++++	1	
		5 - Trace	0	
		8 - Blank but applicable	693	
		9 - Not applicable	4,118	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
 (NHANES II - 1976-1980)
 HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
519	1	Blood (Hematest)		
		0 - Negative	14,750	
		1 - Small+	262	
		2 - Moderate++	215	
		3 - Large+++	127	
		4 - Very Large	62	
		5 - Trace	101	
		8 - Blank but applicable	687	
		9 - Not applicable	4,118	
520	1	Nitrite		
		0 - Negative	15,332	
		1 - Small+	57	
		2 - Moderate++	35	
		3 - Large+++	31	
		4 - Very Large++++	46	
		5 - Trace	9	
		8 - Blank but applicable	694	
		9 - Not applicable	4,118	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
521	1	<u>Urobilinogen</u> (Ehrlich units/100 milliliters of Urine)		
		1 - Normal	15,311	
		2 - 4	53	
		3 - 8	12	
		4 - 12	10	
		8 - Blank but applicable	818	
		9 - Not applicable	4,118	
		 BILE ACID RESULTS		
				<u>Important:</u> Special Subsample Use sample weight in positions 312-317 See Detailed Notes Ages 35-47 years
522-525	4	<u>Postprandial Serum Bile Acid</u> (Micromoles per liter) (μ mol/l) (xxx.x - decimal not shown on tape)		
		0016 - 2050 - As given	3,261	
		8888 - Blank but applicable	828	
		9999 - Not applicable	16,233	

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-1980)

HEMATOLOGY, BIOCHEMISTRY AND URINE MULTISTIX DATA TAPE

TAPE LOC.	NO. OF POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
526	1	<u>Allergy to Eggs</u> 1 - Yes 2 - No 8 - Blank but applicable 9 - Not applicable	64 3,159 866 16,233	
527	1	<u>Challenge given</u> 1 - X-nog 2 - Substitute 8 - Blank but applicable 9 - Not applicable	3,133 71 885 16,233	
528-530	3	Unused Positions		

IV. DETAILED NOTES

TAPE POSITION 11

Size of Place

Size of place classification was derived from the 1970 decennial census of the population. According to the definition used in the 1970 census, the urban population comprised all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs (except Alaska), villages and towns (except towns in New York, New England states, and Wisconsin), but excluding those persons living in the rural portions of extended cities; (b) unincorporated places of 2,500 inhabitants or more; and (c) other territories included in urbanized areas. The remaining population was classified as rural.

Urban areas are further classified by population size for places within urbanized areas and other places outside urbanized areas.

TAPE POSITION 12

SMSA-Not SMSA

Except in New England, a Standard Metropolitan Statistical Area is basically a county or a group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous counties are included in an SMSA if, according to the 1970 census, they are socially and economically integrated with the central city. Each SMSA must include at least one central city, and the complete title of an SMSA identifies the central city or cities. In New England, SMSA's consist of towns and cities, rather than counties.

TAPE POSITIONS 37-41

Family Unit Number

All related sample persons in the same family unit have the same computer-generated family unit code. This will enable analysis of individual family units.

TAPE POSITIONS 56, 206, AND 256

Race

The race of the respondent was marked by observation. The interviewers were instructed to assume that the race of all related persons was the same as the respondent unless otherwise learned. The race categories were "White", "Black" or "Other". If the appropriate category could not be marked by observation, then race was asked. Interviewers were instructed to record persons who responded with something other than White or Black, such as Japanese, Chinese, American Indian, Korean, Hindu, Eskimo, etc. as "Other" and to include Mexicans, Puerto Ricans and other persons of Latin American descent in "White" unless definitely Black, American Indian, or of other nonwhite race.

TAPE POSITIONS 57-58 AND 257-258

<u>Name of Place</u>	<u>United States</u>	<u>Code</u>
Alabama.....		01
Alaska.....		02
Arizona.....		04
Arkansas.....		05
California.....		06
Colorado.....		08
Connecticut.....		09
Delaware.....		10
District of Columbia.....		11
Florida.....		12
Georgia.....		13
Hawaii.....		15
Idaho.....		16
Illinois.....		17
Indiana.....		18
Iowa.....		19
Kansas.....		20
Kentucky.....		21
Louisiana.....		22
Maine.....		23
Maryland.....		24
Massachusetts.....		25
Michigan.....		26
Minnesota.....		27
Mississippi.....		28
Missouri.....		29
Montana.....		30
Nebraska.....		31
Nevada.....		32
New Hampshire.....		33
New Jersey.....		34
New Mexico.....		35
New York.....		36
North Carolina.....		37
North Dakota.....		38
Ohio.....		39
Oklahoma.....		40
Oregon.....		41
Pennsylvania.....		42
Rhode Island.....		44
South Carolina.....		45
South Dakota.....		46
Tennessee.....		47
Texas.....		48

TAPE POSITIONS 57-58 AND 257-258 (cont.)

<u>Name of Place</u>	<u>Code</u>
Utah.....	49
Vermont.....	50
Virginia.....	51
Washington.....	53
West Virginia.....	54
Wisconsin.....	55
Wyoming.....	56

Outlying Areas of the United States

<u>Name of Place</u>	<u>Code</u>	<u>Description</u>
American Samoa	60	U.S. territory in the Pacific
Canal Zone	61	Territory in Panama leased by U.S.
Canton and Enderbury Island	62	Under common US-UK administration
Guam	66	U.S. territory in the Pacific
Johnston Atoll		U.S. territory in the Pacific, includes Sand Island
Midway Islands	71	U.S. territory in the Pacific
Puerto Rico	72	Commonwealth associated with the U.S.
Swan Islands	74	U.S. territory in the Carribean
Trust Territories of the Pacific Islands	75	U.S. administered, includes Caroline, Mariana, and Marshall Island groups
U.S. Miscellaneous Carribean Islands	76	Includes Navassa Islands, Quito Sueno Bank, Roncador Cay, Serrana Bank, Serranilla Bank
U.S. Miscellaneous Pacific Islands	77	Includes Kingman Reef, Howland, Baker and Jarvis Islands, Palmyra Atoll
Virgin Islands	78	U.S. territory in the Carribean
Wake Island	79	U.S. territory in the Pacific

Outside of United States

North America	91
South America	92
Europe	93
Africa	94
Asia	95
Australasia	96
Pacific Islands	97

TAPE POSITIONS 73-75, 76-78, 273-275 AND 276-278

Industry and Occupation Codes

Occupation may be defined as the principal job or business. For this survey, the principal job or business of a respondent is defined in one of the following ways: if the person worked during the two week interview period or had a job or business, the question concerning occupation (or work) applies to the job during that period. If the respondent held more than one job, the question is directed to the one at which the most time was spent. It refers to the one considered most important when equal time is spent at each job. A person who has not begun work at a new job, is looking for work, or is on layoff from work is questioned about the last full-time civilian job. A full-time job is defined as one at which the person spent 35 or more hours per week and which lasted two consecutive weeks or more. A person who has a job but has not yet reported to it or a person who has never had a job or business is classified as a "new worker".

The 1970 census of population Alphabetical Index of Industries and Occupations was used in the coding of both the industry and occupation (Library of Congress Number 74-612012, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock Number 0301-2283).

TAPE POSITIONS 107-108

Family Income Group

The respondent was handed a card with twelve income ranges listed as Group A to Group L and asked "Which of these income groups represents your total combined family income for the past 12 months, that is, yours, your ...'s, etc? Include income from all sources such as wages, salaries, social security or retirement benefits, help from relatives, rent from property and so forth."

If the respondent answered Group A through G, that is with an income less than \$7,000, then questions 21 and 22 detailing exact sources and amounts of income were asked; otherwise, these questions were skipped.

No effort was made to reconcile amounts reported in detailed questions 21 and 22 with the categorical response to the family income group question. During the survey time period no adjustments to the income groups or \$7,000 value were made to account for inflation.

TAPE POSITION 207

Farm, non-farm

This position contains a recode, which combines data on land use (position 25), size (position 26), and amount of sales of farm produce and livestock (positions 27 and 28).

Code 1: Farm: Rural land (coded 2 in position 25) which consisted of 10 or more acres (coded 1 in position 26) with crop sales of \$50 or more (coded 1 in position 27).

OR

Rural land (coded 2 in position 25) with crop sales of \$250 or more (coded 1 in position 28).

Code 2: Non-farm: All other rural land (coded 2 in position 25) as well as land classified as urban (coded 1 in position 25).

TAPE POSITION 209

Region

The United States was divided into four broad geographic regions of approximately equal population. Those regions, which deviate somewhat from the groups used by the Bureau of Census, are as follows:

<u>Region</u>	<u>States Included</u>
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, Hawaii

TAPE POSITIONS 210-212

Poverty Index

Income status was determined by the Poverty Income Ratio (PIR). Poverty statistics published in the Bureau of the Census reports¹⁰⁻¹⁴ were based on the poverty index developed by the Social Security Administration (SSA) in 1964. (For a detailed discussion of the SSA poverty standards, see references 15 and 16.) Modifications in the definition of poverty were adopted in 1969.¹⁷ The standard data series in poverty for statistical use by all executive departments and establishments has been established.¹⁸

The two components of the PIR are the total income of the household (numerator: the median of the income group for incomes \$7,000 and above; the sum of the component parts of the income questions for incomes under \$7,000) and a multiple of the total income necessary to maintain a family with given characteristics on a nutritionally adequate food plan⁹⁻¹³ (denominator). The dollar value of the denominator of the PIR is constructed from a food plan (economy plan) necessary to maintain minimum recommended daily nutritional requirements. The economy plan is designated by the U.S. Department of Agriculture for "emergency or temporary use when funds are low."

For families of three or more persons, the poverty level was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was adjusted by the relatively higher fixed expenses of these smaller households.

The denominator or poverty income cutoff adjusts the family poverty income maintenance requirements by the family size, the sex of the family head, the age of the family head in families with one or two members, and the place of

TAPE POSITIONS 210-121 (cont'd.)

residence (farm, nonfarm). Annual revisions of the poverty income cutoffs are based on the changes in the average cost of living as reflected in the Consumer Price Index.

As shown in the tables, the annual income considered to be the poverty level increases as the family size increases. A family with any combination of characteristics and with the same income as shown in the table has been designated as having a PIR or poverty level of 1.0. The same family with twice the income found in the table would have a PIR of 2.0. Ratios of less than 1.0 can be described as "below poverty" and ratios greater than or equal to 1.0, as "at or above poverty".

Poverty thresholds are computed on a national basis only. No attempt has been made to adjust these thresholds for regional, State, or other variations in the cost of living (except for the farm, nonfarm difference). None of the noncash public welfare benefits such as food stamp bonuses are included in the income of the low income families receiving these benefits. PIR has been adjusted by year (see tables) and accounts in some part for inflation.

A. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1976, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	NONFARM				FARM		
	TOTAL (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	2 877	2 884	3 016	2 788	2 438	2 532	2 348
14 to 64 years.....	2 954	2 959	3 069	2 840	2 542	2 608	2 413
65 years and over.....	2 720	2 730	2 758	2 722	2 322	2 344	2 313
2 persons.....	3 688	3 711	3 721	3 660	3 128	3 133	3 033
Head 14 to 64 years.....	3 806	3 826	3 846	3 733	3 267	3 271	3 159
Head 65 years and over.....	3 417	3 445	3 447	3 428	2 928	2 928	2 922
3 persons.....	4 515	4 540	4 565	4 414	3 858	3 864	3 734
4 persons.....	5 786	5 815	5 818	5 790	4 950	4 953	4 840
5 persons.....	6 838	6 876	6 884	6 799	5 870	5 871	5 847
6 persons.....	7 706	7 760	7 766	7 709	6 585	6 584	6 607
7 persons or more.....	9 505	9 588	9 622	9 375	8 072	8 068	8 428

B. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1977, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	NONFARM				FARM		
	TOTAL (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	3 067	3 075	3 214	2 969	2 588	2 672	2 498
14 to 64 years.....	3 147	3 152	3 267	3 023	2 709	2 776	2 569
65 years and over.....	2 895	2 906	2 936	2 898	2 475	2 495	2 563
2 persons.....	3 928	3 951	3 961	3 907	3 318	3 325	3 176
Head 14 to 64 years.....	4 054	4 072	4 095	3 981	3 466	3 474	3 278
Head 65 years and over.....	3 637	3 666	3 670	3 646	3 128	3 131	3 079
3 persons.....	4 806	4 833	4 860	4 708	4 093	4 110	3 893
4 persons.....	6 157	6 191	6 195	6 162	5 273	5 274	5 213
5 persons.....	7 279	7 320	7 329	7 238	6 247	6 247	6 237
6 persons.....	8 208	8 261	8 268	8 197	7 026	7 026	7 040
7 persons or more.....	10 137	10 216	10 249	9 995	8 708	8 706	8 738

C. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1978, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	NONFARM				FARM		
	TOTAL (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	3 302	3 311	3 460	3 196	2 795	2 898	2 690
14 to 64 years.....	3 386	3 392	3 516	3 253	2 913	2 987	2 764
65 years and over.....	3 116	3 127	3 159	3 118	2 661	2 685	2 650
2 persons.....	4 225	4 249	4 258	4 206	3 578	3 582	3 497
Head 14 to 64 years.....	4 363	4 383	4 407	4 286	3 731	3 737	3 614
Head 65 years and over.....	3 917	3 944	3 948	3 923	3 352	3 354	3 313
3 persons.....	5 178	5 201	5 231	5 065	4 413	4 430	4 216
4 persons.....	6 628	6 662	6 665	6 632	5 681	5 683	5 622
5 persons.....	7 833	7 880	7 888	7 806	6 714	6 714	6 700
6 persons.....	8 825	8 891	8 895	8 852	7 541	7 543	7 462
7 persons or more.....	10 926	11 002	11 038	10 765	9 373	9 386	8 813

D. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1979, BY SIZE AND TYPE OF FAMILY AND FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	NONFARM				FARM		
	TOTAL (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)
1 person (unrelated individual)....	3 683	3 689	3 556	3 855	3 138	3 001	3 236
15 to 64 years.....	3 773	3 778	3 619	3 912	3 254	3 076	3 324
65 years and over.....	3 472	3 479	3 469	3 515	2 963	2 948	2 988
2 persons.....	4 702	4 725	4 669	4 737	3 987	3 917	3 991
Householder 15 to 64 years.....	4 858	4 878	4 762	4 905	4 156	4 027	4 163
Householder 65 years and over...	4 364	4 390	4 362	4 394	3 730	3 686	3 732
3 persons.....	5 763	5 784	5 624	5 820	4 917	4 680	4 928
4 persons.....	7 386	7 412	7 381	7 416	6 329	6 261	6 332
5 persons.....	8 736	8 775	8 690	8 785	7 492	7 509	7 492
6 persons.....	9 849	9 914	9 843	9 922	8 424	8 309	8 428
7 persons or more.....	12 212	12 280	12 037	12 322	10 533	10 178	10 547

¹INCLUDES FEMALE UNRELATED INDIVIDUALS.

²INCLUDES MALE UNRELATED INDIVIDUALS.

E. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1980, BY SIZE AND TYPE OF FAMILY, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	NONFARM				FARM		
	TOTAL (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)
1 person (unrelated individual)...	4 184	4 190	4 037	4 379	3 539	3 392	3 680
15 to 64 years.....	4 286	4 290	4 109	4 441	3 693	3 492	3 773
65 years and over.....	3 941	3 949	3 938	3 990	3 359	3 347	3 392
2 persons.....	5 338	5 363	5 316	5 373	4 502	4 302	4 513
Householder 15 to 64 years.....	5 518	5 537	5 415	5 568	4 714	4 497	4 721
Householder 65 years and over...	4 954	4 983	4 946	4 988	4 233	4 185	4 237
3 persons.....	6 539	6 565	6 386	6 608	5 573	5 271	5 587
4 persons.....	8 385	8 414	8 382	8 418	7 170	7 152	7 170
5 persons.....	9 923	9 966	9 878	9 976	8 472	8 373	8 474
6 persons.....	11 215	11 269	11 227	11 274	9 613	9 168	9 625
7 persons or more.....	13 883	13 955	13 767	13 986	11 915	12 133	11 889

¹INCLUDES FEMALE UNRELATED INDIVIDUALS.

²INCLUDES MALE UNRELATED INDIVIDUALS.

TAPE POSITIONS 282-317

Sample Weights

A multistage estimation procedure was used to calculate the various NHANES II subsample sample weights that are necessary to use in any analysis of the data. The procedure has three basic components: 1) inflation by reciprocals of the probabilities of selection, 2) adjustment for nonresponse, and 3) poststratification ratio adjustment by age-sex-race. A brief description of each component is as follows:

Inflation by reciprocals of the sampling probabilities. Since the survey utilized a three-stage sample design, there were three probabilities of selection: 1) the probability of selecting the PSU, 2) the probability of selecting a segment and housing unit, and 3) the probability of selecting a sample person.

Adjustment for nonresponse. Estimates from the NHANES II data were adjusted to account for sample persons who were not examined. The estimates were inflated by a multiplication factor calculated within five selected income groups, three age groups, four regions, and standard metropolitan statistical area (SMSA) or non-SMSA. The numerator of these factors was the sum of the weights for sample persons resulting from the reciprocal of the probability of selection, and the denominator was the sum of the weights for examined persons also resulting from the reciprocals of the sampling probabilities.

Poststratification by age-sex-race. The estimates were ratio adjusted within each of 76 age-sex-race cells to an independent estimate, provided by the U.S. Bureau of the Census, of the population of each cell as of March 1, 1978, (approximate mid-point of the survey). The ratio adjustment was a multiplication factor of which the numerator was the U.S. population

TAPE POSITIONS 282-317 (cont'd)

and the denominator was the sum of the weights adjusted for nonresponse for examined persons. This ratio estimation process makes the sample more closely representative of the civilian, noninstitutionalized population of the U.S.

Potential bias of nonresponse. Usually a sizeable number of sample persons who initially are willing to complete the household information and some of the medical history questionnaire subsequently will not participate in the examination. This creates the potential for bias if these persons differ from other sample persons with respect to the variables being studied. Intense efforts were undertaken during NHANES II to develop and implement standard procedures and inducements that would reduce the number of nonrespondents and thereby reduce the potential for bias.

The user needs to be aware of and should explore the potential bias for nonresponse in any analysis of the NHANES II data.

TAPE POSITION 327

Poverty, Non-poverty segments

In order to oversample persons with low incomes, enumeration districts (ED's) were sorted into poverty or non-poverty strata as follows: the poverty strata contained ED's with 13 percent or more of persons below the poverty level, and the non-poverty strata contained ED's with less than 13 percent of persons below the poverty level as determined by the 1970 census. Thus, segments (cluster of housing units) within ED's were classified as either poverty or non-poverty.

TAPE POSITIONS 328-339

Special Subsample Weights

Two special subsample weights are found in these tape positions. A procedure similar to that explained in the detailed note for tape positions 282-317 was used to calculate these sample weights. See the detailed note for tape positions 475-510 for the appropriate use of these subsample weights in analysis of the data for serum ferritin, serum vitamin B₁₂, serum folate, red blood cell folate, and differential leukocyte counts.

TAPE POSITION 355

Specimen Collection

In NHANES II, there were 1,337 sample persons for which there is no blood or urine data. These were persons who either refused the venipuncture, had an unsuccessful venipuncture, or were excused for some special circumstances.

TAPE POSITIONS 357-380

Hematological Assessments

The hematology measurements were done in the mobile examination center. Hemoglobin assessments were performed on a Coulter hemoglobinometer. Hematocrit measurements were performed by the spun microhematocrit method. Cell counts were performed on a Coulter Model FN. The hematologic indices (MCV, MCH, MCHC) were computer generated using the spun microhematocrit value and, the following formulas:

$$\begin{aligned} \text{MCV (in femtoliters)} &= \frac{\text{Hematocrit (percent)}}{\text{RBC per liter} \times 100} \\ \text{MCH (in picograms)} &= \frac{\text{Hemoglobin (g/dl)} \times 10}{\text{RBC per liter}} \\ \text{MCHC (in g/dL)} &= \frac{\text{Hemoglobin (g/dL)} \times 100}{\text{Hematocrit (percent)}} \end{aligned}$$

If either hemoglobin or hematocrit values were missing but not both, then an imputed value was calculated for the missing item using the other known value. This was done for 30 hematocrit values and 535 hemoglobin values. No imputations were done if both items were missing. The following mathematical formulae were used in the imputation procedure:

- (1) Hemoglobin missing
Hemoglobin = 0.3448 x Hematocrit
- (2) Hematocrit missing:
Hematocrit = 2.9 x Hemoglobin

TAPE POSITIONS 409-411

Lead Subsample

The NHANES II Lead subsample consisted of all sample persons ages 6 months - 6 years and one-half of all sample persons ages 7-74 years. Those sample persons not in the Lead subsample have a value of 999 in tape positions 409-411.

TAPE POSITIONS 412-415, 416-419

Carboxyhemoglobin Subsample

The NHANES II carboxyhemoglobin subsample consisted of one-half of all sample persons ages 3-74 years. Those persons not in the carboxyhemoglobin subsample have "9999" in each of these two tape locations. Carboxyhemoglobin and methemoglobin level measurements were made by the spectrophotometric method of Small et al.¹

¹ Small, K.A., Radford, E.P., Frazier, J.M., and others: A rapid method for simultaneous measurement of carboxy-and-methemoglobin in blood. J. Appl. Physiol. 31: 154-160, 1971.

Carboxyhemoglobin Imputation

The carboxyhemoglobin imputation code identifies those cases where an absent or unacceptable carboxyhemoglobin value (pos. 412-415) was replaced by an acceptable value from a demographically similar examinee. Whenever a carboxyhemoglobin value was imputed, the corresponding methemoglobin value (pos. 416-419) was also imputed. A "0" in this position indicates imputed values while a "1" indicates nonimputed values. A "9" indicates that this examinee was not selected to receive a carboxyhemoglobin evaluation. In a few cases, a valid carboxyhemoglobin value did not have any methemoglobin value recorded with it; in these cases, the methemoglobin value was not imputed.

TAPE POSITIONS 421-423, 426-429, and 434-437

Serum Lipid Determinations

Blood samples were obtained by venipuncture from both fasting and nonfasting subjects. The cells were allowed to clot and the samples were then centrifuged. The serum was recovered, an aliquot was placed in a plastic screw-capped vial and placed in a freezer within three hours of collection. At approximately two-week intervals, serum specimens collected over the preceding period were placed in a styrofoam shipping container containing dry ice and shipped to George Washington University Lipid Research Clinic Laboratory for analysis of serum cholesterol, triglyceride and high density lipoprotein (HDL) cholesterol. Samples received in the laboratory were placed in a freezer at -15° until they were analyzed; usually within two weeks of receipt. Specimens were allowed to thaw at room temperature and then mixed thoroughly by vortexing. All measurements were performed according to the protocol described for the Lipid Research Clinics (LRC) program.¹

Total Serum Cholesterol and Serum Triglycerides

Analyses were performed on zeolite-treated isopropanol extracts using a Technicon Auto-Analyzer II (AAII) which uses a Lieberman-Burchard reagent for cholesterol and a fluorimetric measurement of triglycerides. Instrumental process was established at the beginning of each analytical run with cholesterol/triglyceride standards in isopropanol (100/50, 200/100, 300/200 and 400/300 mg/dL) provided by the Clinical Chemistry Standardization Section of the Centers for Disease Control (CDC). A serum calibrator was used to automatically adjust instrumental response to reference Abell-Kendall values.² Extracts of a high or low serum cholesterol/triglyceride internal pool were positioned in each tray; results from out-of-control analyses were

TAPE POSITIONS 421-423, 426-429, and 434-437 (cont'd)

rejected and the analyses repeated. The serum calibrator and internal control pools with assigned cholesterol/triglyceride target values were provided by the CDC.

High Density Lipoprotein Cholesterol

HDL cholesterol was determined by the beta quantification procedure, which involves a combination of preparative ultracentrifugation and heparin-manganese precipitation. The determination was made on a supernatant fraction obtained after treatment of the sera with heparin and manganese chloride, to precipitate apo B containing lipoproteins. The precipitate was sedimented by centrifugation for 30 minutes at 1500 x g, and an aliquot of the clear supernatant was extracted with 9.5 volumes of 99 percent isopropanol. The extract was treated with a zeolite-containing mixture to remove interfering substances. The solids were sedimented by centrifuging for 30 minutes at 1500 x g, and the cholesterol content of the extract was measured on the AutoAnalyzer II (Technicon Instruments, Tarrytown, N.Y.) as described in the LRC Program Operations Manual.¹

¹ Manual of Laboratory Operations, Volume 1, Lipid Research Clinics Program, Lipid and Lipoprotein Analysis. DHEW Publications No. (NIH) 75-628, 1974.

² Bachorik P.S., Wood PDS, William J., Kuchmak M., Ahmed S. et al: Automated determinations of total Plasma Cholesterol: A Serum Calibration technique. Clin. Chem. Acta. 96:145, 1979.

TAPE POSITION 424

Lipids Imputation Process

The 272 missing serum cholesterol values were imputed using a "hot deck" procedure. The variables used in the imputation process were sex, age and, for women, hormone/birth control pill use. Since less than one percent of males in NHANES II were taking hormones, the hormone variable was not used for imputing the missing values for males. Consequently, the variables used in the imputation process for each sex are as follows:

Males

(a) age

Females

(a) age

(b) birth control pill use

The serum cholesterol file for males was sorted by age. The serum cholesterol file for females was divided into pill and non-pill users, then each file was sorted by age. When a missing cholesterol value was encountered, the preceding sample person's value of the same age was substituted. If there were consecutive missing values, an iterative process was used to assure that the preceding value was substituted only once.

No imputations were performed for serum triglycerides or HDL cholesterol.

Detailed Notes

TAPE POSITION 425

Birth Control Pill Usage

The birth control pill question was worded as follows:

(a) Have you taken birth control pills during the past six months?

Only if the answer to this question was yes, was the sample person asked:

(b) Are you taking them now?

There were 533 females ages 20-74 years who were interviewed as part of the Health History Supplement of the Medical History for NHANES II that answered "yes" to both questions.

TAPE POSITION 426-429, 430-433

Serum Triglyceride

Serum triglyceride values in positions 426-429 are for the fasting sample only. The nonfasting sample values are indicated as 9999. There were 5903 sample persons in the fasting sample.

The fasting time in hours were calculated from the Glucose Challenge and Related Diabetes Data questionnaire and are recorded in positions 430-431 and recoded in position 432.

The questions were as follows:

- a. How many hours ago did you have your last meal?
- b. Have you had anything to eat or drink, except water, since that meal?
- c. How many hours ago did you have it?

Note: Question "c" was only asked of those sample persons who answered "yes" to question "b."

If the answer to question (b) was "yes", then the fasting time was recorded from the answer to question (c); otherwise, the number of fasting time was recorded from the answer to question (a).

The analyst should use the information on actual fasting time (positions 430-431 or 432) and information on time of examination, morning, afternoon or evening (position 433) to determine legitimate triglyceride values since there are sample persons who have fasting times less than 10 hours or who were examined in the afternoon or evening.

TAPE POSITIONS 438-439

HDL Cholesterol Strata Code for Variance Calculation

The strata codes in positions 438-439 should be used when calculating complex sample variance estimates for HDL cholesterol only. For other variables on this tape, use strata codes as recorded in positions 324-325.

POSITIONS 440-474

OGTT and Blood Glucose Analysis

OGTT's were administered according to National Diabetes Data Group (NDDG) recommendations, which require the following: Subjects fast overnight for 10-16 hours; OGTT's are performed in the morning; a fasting blood sample is taken; subjects drink flavored water containing 75 grams of glucose or carbohydrate equivalent; and additional blood samples are taken. The drink used in NHANES II was Glucola,^a a cola-flavored preparation containing a carbohydrate equivalent of 75 grams of glucose.

Although the NDDG recommends that blood samples be taken at one-half hour intervals up to the final 2-hour sample, in this voluntary survey NHANES II field staff did not attempt to obtain multiple midtest venipunctures. (The test recommended by the World Health Organization requires only fasting and 2-hour blood samples.) They did obtain fasting, single midtest, and 2-hour blood samples in 98 percent of OGTT's in compliance with NDDG guidelines. More than 95 percent of all midtest and 2-hour samples were obtained within 5 minutes of the specified times, and 99 percent were within 10 minutes.

Venous blood samples were obtained in each venipuncture. Plasma was separated from blood, frozen, and shipped in dry ice to the Centers for Disease Control for analysis. There, glucose determinations were made by the Clinical Trials Section, Metabolic Biochemistry Branch, Clinical Chemistry Division, using a microadaptation of the national glucose reference method. This method has been

POSITIONS 440-474 (cont'd.)

shown to have several desirable properties including reliability, transferability, specificity, and precision. It has an average bias of less than 2 percent. Further information on processing of blood samples and the classification and diagnosis of diabetes mellitus is presented in Series 11 Number 237, available from the National Center for Health Statistics. This report also presents an indepth analysis of the possible effects (bias) due to the large amount of missing data for this topic area.

- ^a Mention of brand names is for the purpose of specific identification of the equipment or product used in the survey and does not imply endorsement by the U.S. Department of Health and Human Services.

TAPE POSITIONS 475-478, 479-482, 483-486, 487-490, 491-510

Ferritin, Folate, B₁₂, and Differential Count Subsamples

In NHANES II, the following assessments were done on a special subsample of persons ages 3-74 years from the total examined sample; serum ferritin, serum vitamin B₁₂, serum folate, red blood cell folate, and differential leukocyte counts. This subsample, (sometimes referred to as the "anemia" sample), was defined as a random ten percent sample of all examined sample persons plus all persons who had a predetermined "high" or "low" value for one or more of the following hematologic assessments: hemoglobin, hematocrit, red cell count, white cell count and mean corpuscular volume.

The number of examined sample persons in this subsample was 3,909. For each assessment there were a number of persons who do not have a known value (for numerous reasons) and these are designated by blank but applicable codes. Because the sample size was relatively small to begin with and because of larger numbers of missing values for these assessments, extra caution needs to be used when any analyses of these data are done.

A special sample weight was calculated for use in analysis of these data (except ferritin, see below). It is located in tape positions 334-339. Because this sample weight is based on relatively few people, the population point estimates and standard errors will be much more variable and unstable. This will often limit the presentation and interpretation of the data. Do not use the sample weight found in tape positions 282-287. This latter sample weight is appropriate to use for other blood and urine assessments on this data tape.

TAPE POSITIONS 475-478, 479-482, 483-486, 487-490, 491-510 (cont'd)

For serum ferritin, an additional subsample of persons were selected and analyzed in the laboratory. Therefore there were 5,833 examined sample persons in the "ferritin subsample." Of these, 5157 have a known result. A separate sample weight was calculated for this special subsample and is found in tape positions 328-333. Again, this is the only appropriate sample weight to use when analyzing the serum ferritin data.

The original protocol stated that all of the above assessments (except ferritin) were to be done for all age groups. Because of the difficulty in drawing blood from young children, these subsample assessments were only reported for ages 3-74 years.

In addition to the sample size issue, missing data and methodological issues are significant for each of the assessments listed above. Examples of these issues for the folate and iron assessments have been published^{1,2} and should be reviewed by users before conducting analyses using these measures.

1/ Expert Scientific Working Group. Summary of a report on assessment of iron nutritional status of the United States population. Am J Clin Nutr 1985;42:1318-30.

2/ Senti FR and Pilch SM, editors. Analyses of folate data from the second National Health and Nutrition Examination Survey (NHANES II). J. Nutr. 1985;115:1398-1402

POSITIONS 511-513

Serum Creatinine

Serum creatinine determinations were performed by Western Laboratories (Jaffe Reaction Smac Technicon). All specimens of serum yielding creatinine values for 1.4 mg/100 ml or greater had an immediate repeat determination. The two values were then averaged, with odd identifier numbers rounded up and even identification numbers rounded down. Records showing individual values for the quality control standards were available only for part of the survey. The time period of September 1977 to December 1978 was used to evaluate the overall quality of the data since it contained the greatest number and most consistent coverage of the available quality control determinations. There were no values of the quality control standards run during this period that fell outside the designated range of 1.3 to 1.8. The overall mean of the quality control standards (Monitrol) during that period was 1.58 as compared to an expected mean of 1.55. After the survey was completed the creatinine data were subjected to further editing to eliminate erratic laboratory runs. The editing procedure used a technique involving truncated means adjusted for age and sex to detect out-of-range laboratory runs. This resulted in an elimination of 249 serum creatinine values from those collected on the 18-74 year age group.

The nonresponse rate for serum creatinine was 28.3 percent. The reasons for item nonresponse for serum creatinine included: refusal to give blood and technical failures in blood drawing and handling of the specimens (3%), low

POSITIONS 511-513 (cont'd)

priority given to this determination resulting in lack of serum (10-11%), and editing exclusion of erratic laboratory runs (2%). The remainder of the item nonresponse for serum creatinine can be attributed to loss of specimens in shipping (13%). A large part of this shipping loss resulted from misdirection by the post office of serum from CDC to Western Laboratories.

Because of the large amount of missing data and the lack of quality control data for part of the laboratory analyses, users are urged to be extremely cautious in analyzing and interpreting the findings for serum creatinine.

POSITIONS 514-521

N - Multistix Test Results

Urinalysis

Ames Reagent Strips were used to test for the presence of glucose, bilirubin, ketone, blood, pH, protein, nitrite and urobilinogen in the urine. These test results may provide information regarding the status of carbohydrate metabolism, kidney and liver function, acid-based balance, and urinary tract infection.

Procedure used for testing urine

1. Fresh urine specimen was collected in a clean, dry container. The urine was mixed well immediately before testing.
2. A reagent strip was replaced immediately. Reagent areas of the strip were completely immersed in the fresh urine and removed immediately to avoid dissolving out the reagents.
3. Excess urine was removed from the strip by running the edge of the strip against the rim of the urine container. The strip was held in a horizontal position to prevent possible areas and/or contaminating the hands with urine.
4. The reagent areas were compared to the corresponding color chart on the bottle label at the time specified.

POSITIONS 514-521 (cont'd)

THE STRIP WAS HELD CLOSE TO THE COLOR BLOCKS AND MATCHED CAREFULLY.

Care was taken so that the strip was not laid on the color chart because this would result in the urine soiling the chart.

For more information on the specific procedure for each test, users may contact the National Center for Health Statistics or The Ames Division, Miles Laboratories, Inc., P.O. Box 70, Elkhart, Indiana 46515

POSITIONS 522-527

Serum Bile Acid Information

Two-hour postprandial serum bile acids (SBA) were measured on a subsample of adults ages 35-74 years in NHANES II. Sample persons were administered X-NOG, a high-fat eggnog drink containing approximately 8.6 percent full milk cream and egg yolks (manufactured by Syntex Lab, Palo Alto, CA), or the substitute (peanut butter cups) if an egg allergy was present.

Two hours (\pm 30 minutes) after ingestion of the challenge, the blood sample was taken. The blood samples were analyzed at the Division of Gastroenterology's laboratory at the New York Hospital-Cornell Medical Center in New York City. Postprandial SBA were measured fluorometrically by means of an enzymatic technique with strict quality control.

Of the 4,089 adults in the bile acids sample, 3261 (80 percent) had a SBA value available for analysis. About half of the missing data was due to a loss of blood shipment for the first five locations in the survey. The rest of the missing data was due to a variety of reasons including: refusal to have the blood drawn, an allergy to the challenge drink, insufficient amount of sera, etc. Users should be cognizant of the potential bias these missing data may have on the analysis and presentation of serum bile acids results.

IV. APPENDIXData Collection Techniques and Content

Tfollowing:

A. Questionnaires completed in the household:

(1) Household questionnaire: For each household member, questions referred to family relationships; certain demographic items such as age, sex, and race; selected housing information; occupation, income, education, veteran status; and an indication of participation in food stamp programs.

(2) Medical history questionnaires:(a) For each sample person ages 6 months-11 years

The questionnaire included items on birth weight, prematurity, congenital conditions, medication, neurological conditions, lead poisoning, accidents, hospital care, disability, diarrhea, pica, vision, and a variety of chronic conditions. In addition, data were collected on allergies, kidney and bladder disease, anemia, speech and hearing, lung and chest conditions and participation in food programs.

(b) For each sample person ages 12-74 years

The questionnaire included items on medication; hospital care, tuberculosis; a variety of acute and chronic diseases; tobacco usage, physical activity; weight; height; vision disability, exposure to pesticides; gastrointestinal

problems; and for females, a menstrual and pregnancy history. In addition, data were collected on anemia, diabetes, respiratory condition, hearing and speech, liver and gallbladder conditions, kidney and bladder disease, allergies, hypertension, cardiovascular conditions, stroke, arthritis (stressing middle and upper back and neck problems), and participation in food programs.

Questionnaires and tests administered in the mobile examination center:

(3) Dietary Questionnaires

- (a) For each examined person, a 24-Hour Recall was administered by trained dietary interviewers. Specific and quantitative detail of every food or drink consumed during the previous day was recorded and calculated, thus providing estimates of calories, protein, carbohydrates, fat, unsaturated fats, cholesterol, and specific vitamins and minerals consumed.
- (b) For each examined person, a Food Frequency interview was administered to ascertain usual patterns of food consumption. Daily and/or weekly consumption of foods within 26 subgroups were recorded. In addition, data were collected on usual vitamin-mineral supplement usage.
- (c) For each person ages 12-74 years, a Dietary Supplement form was self-administered and reviewed. This form provided information on special diets, recent medications and barriers to purchasing groceries or eating foods; it does not provide information on vitamin/mineral or other supplements to the diet.

- (4) Medication/Vitamin Usage Form provided information on the past week's usage of any medicines; vitamins or minerals for all examined persons.
- (5) Behavior Questionnaire elicited data on behavior which may be associated with coronary heart disease for examined persons ages 25-74.

(a.) Examination by physician

A physician performed and recorded the results of a medical examination giving special attention to specified findings related to nutrition, to hearing, to the thyroid gland, and to the cardiovascular, respiratory, neurological and musculoskeletal systems.

(b.) Special clinical procedures and tests

A specially trained health technician carried out the following on examined persons in the designated age ranges:

1. Spirometry trials of examined persons ages 6-24 years, were digitized and recorded on magnetic tape. Various pulmonary function indicators such as FVC (forced vital capacity), FEV₁ (forced expiratory volume in one second), and peak flow rate were subsequently derived from these data.
2. Electrocardiograms Electrocardiographic signals of examined persons ages 25-74 years were digitized and recorded on magnetic tape providing normative data of amplitude, duration, interval and axis measurements and permitting interpretations of heart disease according to the Minnesota classification code.

3. Body Measurements were made on all examinees and included standing height, body weight, triceps and subscapular skinfolds, and several other anthropometric measurements.
4. Puretone audiometry Tests were carried out on examined persons between the ages of 4 and 19 years, permitting determination of threshold levels of hearing for frequencies of 500, 1000, 2000, and 4000 Hertz for right and left ears.
5. Speech recording, involving use of tape recording of the subject's repetition of specially developed sentences, was carried out on examined persons between the ages of 4 and 6 years, permitting interpretations as an indication of problems with articulation and language development.
6. Allergy tests, involving skin tests (prick test) with eight common allergens (housedust, alternaria, cat fur, dog fur, ragweed, oak, rye grass, and Bermuda grass).
The tests were made on examined persons between the ages of 6 and 74 years, to obtain degrees of skin reaction.

B. X-rays

For examined persons ages 25-74 years, two x-rays were made. No x-rays were taken of pregnant women and no lumbar x-rays were taken on women under 50 years of age.

- (1) X-ray of cervical and lumbar spine, were taken to provide evidence of osteoarthritis and degenerative disc disease,

(2) X-ray of chest, to be used in the diagnosis of respiratory diseases and to serve as a measure of left ventricular enlargement.

C. Urine tests

Tests as follows were performed on casual samples of urine:

- (1) N-Multistix tests for qualitative protein, glucose, ketones, bilirubin, blood, urobilinogen, pH, and bacteriuria (nitrite test) were done for examined persons ages 6-74 years.
- (2) Urinary sediments, including red cells, white cells, and casts, were measured for a subsample of examined adults ages 20-74 years.
- (3) Gonorrhea cultures, of urinary sediments were performed for male and female examined persons ages 12-40 years. However, of those females who received the Glucose Tolerance Test (GTT) only those ages 20-24 years had the gonorrhea test performed.
- (4) Analyses for pesticide residue and metabolite levels, were carried out on a subsample of examined persons ages 12-74 years, including measures of the body burdens from exposure to alkyl phosphate residues and metabolites, carbamate residues, phenolic compound residues and malathion metabolites.

D. Tests on blood samples

Samples of blood provide a broad range of information related to health and nutrition. The particular tests performed varied with the specific target condition and age group as described in the Series 1, No. 15 program description (page 39).

(1) Glucose tolerance test (GTT)

This test involved collection of blood specimens while in a fasting state as well as at one and two hours after glucose challenge. The test was performed on a specified subsample of examined adults to provide estimates of the prevalence of diabetes.

(2) Tests related to liver function

(a) Post-prandial liver bile acid test. This test measures the ability of the liver to remove bile acids from the blood following consumption of a food preparation which induces eventual addition of bile acids to the blood via contraction of the gallbladder.

(b) Liver biochemistries performed include bilirubin, SGOT, and alkaline phosphatase tests.

(3) Anemia-related laboratory tests

The tests made to characterize anemia consisted of protoporphyrin, iron, total iron binding capacity (TIBC), zinc, copper, red cell folates, serum folates, serum ferritin, B₁₂, and the determination of abnormal hemoglobin.

(4) Other nutritional biochemistries

These tests include albumin, Vitamin A and Vitamin C.

(5) Serum lipids

Because of their important relevance to cardiovascular disease, determinations were made of cholesterol, triglycerides, and high density lipoprotein (HDL).

(6) Biochemistries for body burden from environmental exposures

Determinations were made of body burden levels of lead and pesticide residues and metabolites. Tests were also performed for carboxyhemoglobin which reflects environmental exposure to carbon monoxide and the individual's smoking habits.

(7) Hematology

The hematology included determinations of hemoglobin, hematocrit, red blood cell count, white blood cell count and differential leukocyte analysis, and red blood cell morphology and hemoglobin phenotyping.

(8) Kidney function

The only quantitative test for kidney function performed on blood samples was the serum creatinine test.

(9) Syphilis

The serology determinations for syphilis included qualitative and quantitative ART, a FTA-ABS and MHA-TP.

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