National Health and Nutrition Examination Survey
Codebook for Data Release (1999-2000)

MEC Examination
Cardiovascular Fitness (CVX)
Person level data -- use Examination Weights for analysis

June 2004

SEQN	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Respondent sequence number

English Text: Respondent sequence number

English Instructions:

CVDEXSTS	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	CV fitness exam status

English Text: CV fitness exam status

English Instructions:

Codes:	Skip To Values:
1= VO2max estimated	
2= Tested but VO2max estimate missing	
3= Not done	

CVDEXCMT	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Comment code for CV fitness exam status

English Text: Comment code for CV fitness exam status

English Instructions:

Codes:	Skip To Values:
0= None	
1= Met exclusion criteria	

2= Pregnant more than 12 weeks

3= Refusal

4= No time

5= Technical problem

6= Met priority 1 stopping criteria

7= Met priority 2 stopping criteria

8= Not able to calculate VO2max

90= Other

CVDEXCL1	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per physical limitations

English Text: Excluded from exam due to selected physical functioning limitations

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXCL2	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per cardiovascular conditions

English Text: Excluded from exam due to selected cardiovascular conditions/symptoms

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXCL3	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per lung/breathing conditions

English Text: Excluded from exam due to selected lung/breathing conditions/symptoms

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXCL4	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per asthma symptoms

English Text: Excluded from exam due to selected asthma symptoms

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXCL5	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per medications

English Text: Excluded from exam due to taking selected exclusionary medications

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXCL6	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Excluded per other specific reasons

English Text: Excluded from exam due to other specific reasons

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220a	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, excessive HR in stage 2

English Text: Reason for Priority 2 Stop: Heart rate exceeds predetermined limit during first 2 minutes of stage 2

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220b	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, excessive HR in stage 1

English Text: Reason for Priority 2 Stop: Heart rate exceeds predetermined limit during stage 1

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220c	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, excessive BP

English Text: Reason for Priority 2 Stop: Exercise blood pressure exceeds 260 mmHg systolic and/or 115 mmHg diastolic

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220e	Target
	B(12 Yrs. to 49 Yrs.)

Hard Edits	SAS Label
	Priority 2 Stop, significant drop in SBP

English Text: Reason for Priority 2 Stop: Significant drop (> 20 mm Hg) in systolic blood pressure during exercise

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220g	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, variability in HR

English Text: Reason for Priority 2 Stop: Sudden, noticeable variability in heart rate (sudden change of more than 30 beats/minute during a stage)

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220h	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, participant request

English Text: Reason for Priority 2 Stop: Participant requests to stop test or reports severe fatigue

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220i	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, equipment failure

English Text: Reason for Priority 2 Stop: Equipment failure

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220j	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, participant grips rails

English Text: Reason for Priority 2 Stop: Participant is unable to stop gripping hand rails

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220k	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, participant overexerted

English Text: Reason for Priority 2 Stop: Participant reports a rating of perceived exertion more than 17

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVQ220l	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, technician discretion

English Text: Reason for Priority 2 Stop: Technician discretion (technician notices signs of severe exertion)

English Instructions:

Codes:	Skip To Values:

1= Yes	
2= No	

CVQ220m	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Priority 2 Stop, other specified reasons

English Text: Reason for Priority 2 Stop: Other specified reasons

English Instructions:

Codes:	Skip To Values:
1= Yes	
2= No	

CVDEXLEN	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Length of CV fitness exam (min)

English Text: Length of the CV fitness exam (minutes)

English Instructions:

CVDEXMER	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Examiner ID code

English Text: Examiner ID code

English Instructions:

CVDPMHR	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Predicted maximal heart rate (per min)

English Text: Predicted maximal heart rate (per minute)

English Instructions: Predicted maximal heart rate = 220 - (Age at interview)

CVXPARC	Target

	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 7	Physical activity readiness code

English Text: Physical activity readiness (PAR) code

English Instructions: The PAR code was determined by a series of questions to describe the participant's typical physical activity level. (See CV Fitness Procedures Manual, Appendix E)

Codes: **Skip To Values:**

0= Little or no regular recreation, sport or physical activity and avoids walking or exertion

1= Little or no regular recreation, sport or physical activity but walks for pleasure and occasionally exercises

2= Participating regularly in recreation or work requiring modest physical activity for 10 to 60 minutes per week

3= Participating regulalry in recreation or work requiring modest physical activity for more than 60 minutes per week

4= Participating regularly in heavy physical activity for less than 30 minutes per week

5= Participating regularly in heavy physical activity for 30 - 60 minutes per week

6= Participating regularly in heavy physical activity for 1 - 3 hours per week

7= Participating regularly in heavy physical activity for more than 3 hours per week

	Target
CVDVOMAX	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 100	Predicted VO2max (ml/kg/min)

English Text: Predicted maximal oxygen uptake (ml/kg/min)

English Instructions: Predicted VO2max = 56.363 + [1.921 x (PAR Code)] - [0.381 x (Age at interview)] - [0.754 x (BMI)] + [10.987 x (F=0, M=1)] . This is used in the determination of the exercise protocol used in the treadmill test. (See CV Fitness Procedures Manual, Appendix F)

	Target
CVAPROT	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**

0 to 9	Assigned exercise protocol

English Text: Assigned exercise protocol

English Instructions: See CV Fitness Procedures Manual, Section 3.7 and Appendix H

CVDPROT	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Exercise protocol used in stage 1 and 2

English Text: Exercise protocol used in stage 1 and stage 2 after adjustment for warm-up heart rate

English Instructions: If the heart rate in Warm-up is greater than 60 % of the predicted maximal heart rate (PMHR), the assigned exercise protocol is decreased by 1 for the remainder of the treadmill test. If the heart rate in Warm-up is less than 50 % of the PMHR, the assigned exercise protocol is increased by 1 for the remainder of the treadmill test. This variable reflects the actual exercise protocol used in stage 1 and stage 2 after the adjustment for heart rate during warm-up. (See CV Fitness Procedures Manual, Sections 3.12 and 4.5)

CVATEMP	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 140	Room temperature (degrees F)

English Text: Room temperature (Degrees Fahrenheit)

English Instructions: Measured by a digital thermometer directly integrated with the computer system. If temperature is not captured automatically, the temperature can be read off the monitor and entered manually.

CVAARM	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Arm selected for blood pressure monitor

English Text: Arm selected for blood pressure monitoring

English Instructions: Right arm is used for all measurements unless that arm cannot be used, then the left arm is used.

Codes:	**Skip To Values:**
1= Right	
2= Left	

	3= Could not obtain

CVACUFF	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Cuff size for blood pressure monitor

English Text: Cuff size used for blood pressure monitoring

English Instructions:

Codes: **Skip To Values:**
  1= Child
  2= Adult
  3= Large arm

CVAVEST	Target
	M(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Mesh vest used

English Text: Mesh vest used

English Instructions: Mesh vest is used with some male participants to help maintain adherence of electrodes to the chest when chest hair is present.

Codes: **Skip To Values:**
  1= Yes
  2= No
  7= Refused

CVAWS1	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 3.7	Warm-up speed (mph)

English Text: Warm-up speed (miles per hour)

English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage

CVAWG1	Target
	B(12 Yrs. to 49 Yrs.)

Hard Edits	SAS Label
0 to 14.5	Warm-up grade (% incline)
English Text: Warm-up grade (% incline)	
English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage	

CVDWTIM	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in warm-up (min)
English Text: Amount of time spent in warm-up (minutes)	
English Instructions: If warm-up is completed, the time is always 2 minutes.	

CVXWRPE	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
6 to 20	Warm-up rating of perceived exertion
English Text: Warm-up rating of perceived exertion (RPE)	
English Instructions: RPE is a scale of perceived exertion with a range of 6-20 with 6 being equivalent to a low level of effort and 20 being maximal exertion. The exam is stopped if the participant rates his/her effort greater than 17. (See CV Fitness Procedures Manual, Chapters 3.9.7 and 3.10.1)	

CVDWHR	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Warm-up heart rate (per min)
English Text: Warm-up heart rate (per minute)	
English Instructions: Heart rate is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system. (See CV Fitness Procedures Manual, Sections 3.9.6 and 4.4.4)	

CVDWSY	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Warm-up systolic BP (mm Hg)

English Text: Warm-up systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDWDI	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Warm-up diastolic BP (mm Hg)

English Text: Warm-up diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDS1S	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 3.7	Stage 1 speed (mph)

English Text: Stage 1 speed (miles per hour)

English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage

CVDS1G	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 14.5	Stage 1 grade (% incline)

English Text: Stage 1 grade (% incline)

English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage

CVDS1TIM	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in Stage 1 (min)

English Text: Amount of time spent in Stage 1 (minutes)

English Instructions: If Stage 1 is completed, the time is always 3 minutes.

CVXS1RPE	Target

	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
6 to 20	Stage 1 rating of perceived exertion

English Text: Stage 1 rating of perceived exertion (RPE)

English Instructions: RPE is a scale of perceived exertion with a range of 6-20 with 6 being equivalent to a low level of effort and 20 being maximal exertion. The exam is stopped if the participant rates his/her effort greater than 17. (See CV Fitness Procedures Manual, Chapters 3.9.7 and 3.10.1)

CVDS1HR	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Stage 1 heart rate (per min)

English Text: Stage 1 heart rate (per minute)

English Instructions: Heart rate is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system. In the event the heart rate is not captured automatically at the end of stage 1, the technician would manually enter the readings from the heart rate monitor. (See CV Fitness Procedures Manual, Sections 3.9.8 and 4.4.6)

CVDS1SY	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Stage 1 systolic BP (mm Hg)

English Text: Stage 1 systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDS1DI	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Stage 1 diastolic BP (mm Hg)

English Text: Stage 1 diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDS2S	**Target**

	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 3.7	Stage 2 speed (mph)

English Text: Stage 2 speed (miles per hour)

English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage

CVDS2G	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 14.5	Stage 2 grade (% incline)

English Text: Stage 2 grade (% incline)

English Instructions: See CV Fitness Procedures Manual, Appendix J for speed and grade table by protocol and stage

CVDS2TIM	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in Stage 2 (min)

English Text: Amount of time spent in Stage 2 (minutes)

English Instructions: If Stage 2 is completed, the time is always 3 minutes.

CVXS2RPE	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
6 to 20	Stage 2 rating of perceived exertion

English Text: Stage 2 rating of perceived exertion (RPE)

English Instructions: RPE is a scale of perceived exertion with a range of 6-20 with 6 being equivalent to a low level of effort and 20 being maximal exertion. The exam is stopped if the participant rates his/her effort greater than 17 and confirms unable to continue the test. (See CV Fitness Procedures Manual, Chapters 3.9.7 and 3.10.1)

CVDS2HR	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Stage 2 heart rate (per min)

English Text: Stage 2 heart rate (per minute)

English Instructions: Heart rate is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system. In the event the heart rate is not captured automatically at the end of stage 2, the technician would manually enter the readings from the heart rate monitor. (See CV Fitness Procedures Manual, Sections 3.9.9 and 4.4.7)

CVDS2SY	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Stage 2 systolic BP (mm Hg)

English Text: Stage 2 systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDS2DI	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Stage 2 diastolic BP (mm Hg)

English Text: Stage 2 diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR1TIM	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in Recovery 1 (min)

English Text: Amount of time spent in Recovery 1 (minutes)

English Instructions: If Recovery 1 is completed, the time is always 1 minute.

CVDR1HR	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Recovery 1 heart rate (per min)

English Text: Recovery 1 heart rate (per minute)

English Instructions: Heart rate is taken by the automated blood pressure/heart rate

monitor and captured directly into the computer system.

CVDR1SY	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Recovery 1 systolic BP (mm Hg)

English Text: Recovery 1 systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR1DI	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Recovery 1 diastolic BP (mm Hg)

English Text: Recovery 1 diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR2TIM	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in Recovery 2 (min)

English Text: Amount of time spent in Recovery 2 (minutes)

English Instructions: If Recovery 2 is completed, the time is always 1 minute.

CVDR2HR	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Recovery 2 heart rate (per min)

English Text: Recovery 2 heart rate (per minute)

English Instructions: Heart rate is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR2SY	Target
	B(12 Yrs. to 49 Yrs.)

Hard Edits	SAS Label
0 to 300	Recovery 2 systolic BP (mm Hg)

English Text: Recovery 2 systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR2DI	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Recovery 2 diastolic BP (mm Hg)

English Text: Recovery 2 diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR3TIM	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Amount of time spent in Recovery 3 (min)

English Text: Amount of time spent in Recovery 3 (minutes)

English Instructions: If Recovery 3 is completed, the time is always 1 minute.

CVDR3HR	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Recovery 3 heart rate (per min)

English Text: Recovery 3 heart rate (per minute)

English Instructions: Heart rate is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system. The treadmill test is usually completed after two minutes of Recovery. A third minute of Recovery will only be taken if the participant's heart rate is greater than 110 after 2 minutes of Recovery.

CVDR3SY	Target
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Recovery 3 systolic BP (mm Hg)

English Text: Recovery 3 systolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDR3DI	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
0 to 300	Recovery 3 diastolic BP (mm Hg)

English Text: Recovery 3 diastolic blood pressure (mm Hg)

English Instructions: Blood pressure is taken by the automated blood pressure/heart rate monitor and captured directly into the computer system.

CVDESVO2	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Estimated VO2max (ml/kg/min)

English Text: Estimated maximal oxygen uptake (ml/kg/min).

English Instructions: Maximal oxygen consumption (VO2max) is estimated by measuring the heart rates response to known levels of submaximal work. (See the CV Fitness Procedures Manual, Appendix G for more details on the calculation of the estimated VO2max)

CVDFITLV	**Target**
	B(12 Yrs. to 49 Yrs.)
Hard Edits	**SAS Label**
	Cardiovascular fitness level

English Text: Cardiovascular fitness level

English Instructions: The level of cardiovascular fitness is categorized based on gender-age specific cut-points of estimated VO2max. (See CV Fitness Procedures Manual, Appendix I for details.)

Codes: **Skip To Values:**

    1= Low

    2= Moderate

    3= High