

**National Health and Nutrition
Examination Survey 2005–2006**

**Documentation, Codebook,
and Frequencies**

Total Cholesterol

Laboratory

**Survey Years:
2005 to 2006**

**SAS Transport File:
TCHOL_D.XPT**



November 2007

NHANES 2005–2006 Data Documentation

Laboratory Assessment: Total Cholesterol (TCHOL_D)

First Published: November 2007

Last Revised: N/A

Component Description

The main element of the cardiovascular disease laboratory component in NHANES is blood lipid levels. Cardiovascular disease is the leading cause of death in the United States. The data will be used to monitor the status of hyperlipidemia and the success of the National Cholesterol Education Program.

Eligible Sample

Participants aged 6 years and older were tested.

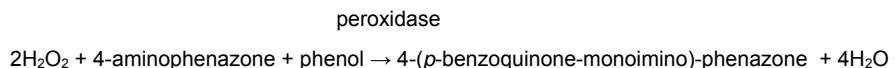
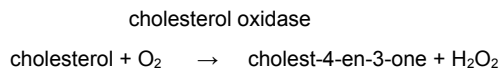
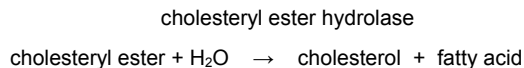
Description of Laboratory Methodology

There were changes in the instruments used to measure total cholesterol, but the method and lab site were the same as 2003-2004. In 2005, total cholesterol was measured enzymatically in serum using the Roche Hitachi 717. In 2006, total cholesterol was measured enzymatically in serum using the Roche Hitachi 717 and 912. No adjustment was necessary for the change in instrumentation for total cholesterol.

Hitachi 717 and 912

Total cholesterol is measured enzymatically in serum in a series of coupled reactions using cholesteryl ester hydrolase, cholesterol oxidase and peroxidase. The phenazone is measured at 500 nm and the color intensity is proportional to cholesterol concentration.

The reaction sequence is as follows:



A detailed description of the laboratory method used can be found on the NHANES website in the Laboratory Procedures Manual.

Analytic Notes

The analysis of NHANES 2005–2006 laboratory data must be conducted with the key survey design and basic demographic variables. The NHANES 2005–2006 Household Questionnaire Data Files contain demographic data, health indicators, and other related information collected during household interviews. They also contain all survey design variables and sample weights for these age groups. The phlebotomy file includes auxiliary information such as the conditions precluding venipuncture. The household questionnaire and phlebotomy files may be linked to the laboratory data file using the unique survey participant identifier SEQN.

LBXTC:

The Lipid Laboratory Total Cholesterol data file contains laboratory test results for total cholesterol (LBXTC), which uses the reference analytic method. However, the NHANES biochemistry profiles laboratory also includes measurements of total cholesterol. The biochemistry profile total cholesterol variable name is LBXSCH. The appropriate variable to use is LBXTC from the Lipid Laboratory.

Data Processing and Editing

Blood specimens were processed, stored, and shipped to Johns Hopkins Hospital, Baltimore, MD for analysis. Detailed specimen collection and processing instructions are discussed in the NHANES Laboratory/Medical Technologists Procedures Manual (LPM). Read the LABDOC file for detailed data processing and editing protocols. The analytical methods are described in the Description of the Laboratory Methodology section.

One derived variable was created in this data file. The formula for their derivation is as follows:

LBDTCSI:

The total cholesterol in mg/dL (LBXTC) was converted to mmol/L (LBDTCSI) by multiplying by 0.02586.

Detailed instructions on specimen collection and processing can be found on the NHANES web site.

References

N/A

Locator Fields

Title: Total Cholesterol

Contact Number: 1-866-441-NCHS

Years of Content: 2005–2006

First Published: November 2007

Last Revised: N/A

Access Constraints: None

Use Constraints: None

Geographic Coverage: National

Subject: Cholesterol

Record Source: NHANES 2005–2006

Survey Methodology: NHANES 2005–2006 is a stratified multistage probability sample of the civilian non-institutionalized population of the U.S.

Medium: NHANES Web site; SAS transport files

**National Health and Nutrition Examination Survey
Codebook for Data Production (2005-2006)**

**Total Cholesterol (TCHOL_D)
Person Level Data**

November 2007



SEQN	Target
	B(6 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Respondent sequence number
English Text: Respondent sequence number.	
English Instructions:	

LBXTC	Target
	B(6 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Total cholesterol (mg/dL)
English Text: Total cholesterol (mg/dL)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
78 to 615	Range of Values	7360	7360	
.	Missing	726	8086	

LBDTCSI	Target
	B(6 Yrs. to 150 Yrs.)
Hard Edits	SAS Label
	Total Cholesterol(mmol/L)
English Text: Total Cholesterol(mmol/L)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
2.02 to 15.9	Range of Values	7360	7360	
.	Missing	726	8086	