National Health and Nutrition Examination Survey 1999–2000

Documentation, Codebook, and Frequencies

Serum Transferrin and Receptor

Laboratory
Surplus Sera

Survey Years:
1999 to 2000

SAS Export File:
SSTFR_A.XPT

First Published: July 2008

Last Revised: August 2008

NHANES 1999-2000 Data Documentation

Laboratory Assessment: Serum transferrin receptor and serum ferritin in pregnant women (NHANES 1999-2000 Surplus Sera)

Years of Coverage: 1999-2000 **First Published:** July 2008 **Last Revised:** August 2008

Component Description

Serum transferrin receptor and ferritin were measured in pregnant women from NHANES 1999-2000 to provide estimates of iron deficiency based on body iron levels observed in these women. Body iron estimates can be predicted using an equation that includes measured serum transferrin receptor and serum ferritin levels. Serum transferrin receptor was not added to NHANES until 2003. Serum ferritin was measured in NHANES 1999-2000 with a method that has now been shown to differ from the method needed to provide the appropriate ferritin values for use in the body iron model equation. Thus, serum ferritin was re-measured using the appropriate method for body iron calculations.

Eligible Sample

Pregnant women aged 13 to 56 years from NHANES 1999-2000 with stored sera (N = 625). The pregnant women for this sample were identified using either one of the two available summary pregnancy variables (RIDEXPRG or RIDPREG) or in the case of 20 women < 18 years of age from NHANES 1999-2000, with the self-reported pregnancy item RHQ140. This item was used for these 20 women because RIDEXPRG and RIDPREG were not provided for women < 18 years of age in NHANES 1999-2000.

Description of Laboratory Methodology

The method for measurement of soluble transferrin receptor (sTfR) is immuno-turbidimetry using Roche kits on the Hitachi 912 clinical analyzer. Latex bound anti-sTfR antibodies react with the antigen in the sample to form an antigen/antibody complex. Following agglutination, this is measured turbidimetrically. This is the same method used to measures sTfR starting in NHANES 2003+.

The method principle for measurement of Ferritin is immuno-turbidimetry using the Roche/Hitachi 912 clinical analyzer. Latex bound Ferritin antibodies react with the antigen in the sample to form an antigen/antibody complex. Following agglutination, this is measured turbidimetrically. Complexes formed are proportional to the Ferritin concentration, and were measured at 700nm (primary wavelength). This is the same method used to measure serum ferritin starting in

NHANES 2004. These ferritin data do not need to be adjusted to be compared with NHANES 2003-2004 ferritin data.

Laboratory Quality Control and Monitoring

The NHANES quality control and quality assurance protocols (QA/QC) meet the 1988 Clinical Laboratory Improvement Act mandates. Detailed quality control and quality assurance instructions are discussed in the NHANES Laboratory/Medical Technologists Procedures Manual (LPM). A detailed description of the quality assurance and quality control procedures can be found at NHANES web site.

Data Processing and Editing

Data was received after the sTfR and ferritin assays were complete. The data were not edited.

Data Access: All data are publicly available.

Analytic Notes

There are two variables:
SSTFR: serum transferrin receptor (mg/L)
SSFER: Serum ferritin (ng/mL)

References

None

Locator Fields

Title: Transferrin receptor and ferritin in pregnant women NHANES 1999-2000

Contact Number: 1-866-441-NCHS

Years of Content: 1999-2000

First Published: July 2008

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Access Constraints: None

Use Constraints: None

Geographic Coverage: National

Subject: Transferrin receptor and serum ferritin

Record Source: NHANES 1999-2000

Survey Methodology: Continuous NHANES (including 1999-2000 data) 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 (1999-2000)

Serum transferrin receptor and serum ferritin in pregnant women (SSTFR_A)

Person Level Data

First Published: July 2008
Last Revised: August 2008

SEQN	Target
	F(13 Yrs. to 56 Yrs.)
Hard Edits	**SAS Label**
	Respondent sequence number
English Text: Respondent sequence number.	
English Instructions:	

SSTFR	Target
	F(13 Yrs. to 56 Yrs.)
Hard Edits	**SAS Label**
	Serum transferrin receptor (mg/l)
English Text: Serum transferrin receptor (mg/l)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
1.4 to 9	Range of Values	278	278	
.	Missing	0	278	

SSFER	Target
	F(13 Yrs. to 56 Yrs.)
Hard Edits	**SAS Label**
	Serum ferritin (ng/ml)
English Text: Serum ferritin (ng/ml)	
English Instructions:	

Code or Value	Description	Count	Cumulative	Skip to Item
4 to 314	Range of Values	277	277	
.	Missing	1	278	