

# National Health and Nutrition Examination Survey 2001–2002

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## Documentation, Codebook, and Frequencies

**Surplus Specimen Laboratory Component:**  
Serum transferrin receptor and serum ferritin in  
pregnant women

**Survey Years:**  
**2001 to 2002**

**SAS Export File:**  
**SSTFR\_B.XPT**



First Published: July 2008  
Last revised: N/A

## NHANES 2001-2002 Data Documentation

**Laboratory Assessment:** Serum transferrin receptor and serum ferritin in pregnant women (NHANES 2001-2002 Surplus Sera)

**Years of Coverage:** 2001-2002

**First Published:** July 2008

**Last Revised:** N/A

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### **Component Description**

Serum transferrin receptor and ferritin were measured in pregnant women from NHANES 2001-2002 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 2001-2002 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 2001-2002 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 immunoturbidimetry 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 measure 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:

LBXTFR: serum transferrin receptor (mg/L)

LBXFER: Serum ferritin (ng/mL)

**References**

None

## Locator Fields

**Title:** Transferrin receptor and ferritin in pregnant women NHANES 2001-2002

**Contact Number:** 1-866-441-NCHS

**Years of Content:** 2001-2002

**First Published:** July 2008

**Revised:** N/A

**Access Constraints:** None

**Use Constraints:** None

**Geographic Coverage:** National

**Subject:** Transferrin receptor and serum ferritin

**Record Source:** NHANES 2001-2002

**Survey Methodology:** Continuous NHANES (including 2001-2002 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 (2001-2002)**

**Serum transferrin receptor and serum ferritin in pregnant women  
(SSTFR\_B)**

**Person Level Data**

July 2008



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

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

Code or Value	Description	Count	Cumulative	Skip to Item
1.5 to 18	Range of Values	343	343	
.	Missing	0	343	

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

Code or Value	Description	Count	Cumulative	Skip to Item
3 to 394	Range of Values	343	343	
.	Missing	0	343	