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Documentation, Codebook, and Frequencies

Vitamin D

Laboratory Second Day Exam

Survey Years: 2001 to 2002

SAS Export File: VID_2_B.XPT

October 2008

NHANES 2001-2002 Data Documentation

Laboratory Assessment: Vitamin D Second Day Exam (VID_2_B)

First Published: October 2008

Last Revised: N/A

See the general documentation on second day laboratory exams. Also, see the documentation for the primary exam data for laboratory 6 Vitamin D.

Component The objectives of this component are: 1) to provide data for monitoring Description secular trends in measures of nutritional status in the U.S. population; 2) to evaluate the effect of people's habits and behaviors such as physical activity and the use of alcohol, tobacco, and dietary supplements on people's nutritional status; and 3) to evaluate the effect of changes in nutrition and public health policies including welfare reform legislation, food fortification policy, and child nutrition programs on the nutritional status of the U.S. population. These data will be used to estimate deficiencies and toxicities of specific nutrients in the population and subgroups, to provide population reference data, and to estimate the contribution of diet, supplements, and other factors to serum levels of nutrients. Data will be used for research to further define nutrient requirements as well as optimal levels for disease prevention and health promotion.

EligibleParticipants aged 16-69 years and older who do not meet any of the
exclusion criteria are eligible.

Description of Laboratory Methodology The Diasorin (formerly Incstar) 25-OH- Vitamin D assay consists of a two-step procedure. The first procedure involves an extraction of 25-OH-D and other hydroxylated metabolites from serum with acetonitrile. Following extraction, the treated sample is assayed by using an equilibrium RIA procedure. The RIA method is based on an antibody with specificity to 25-OH-D. The sample, antibody, and tracer are incubated for 90 min at 20-25 °C. Phase separation is accomplished after a 20-minute incubation at 20-25 °C with a second antibodyprecipitating complex. A NSB buffer is added after this incubation and prior to centrifugation to aid in reducing non-specific binding. More detailed information about the Diasorin RIA method can be found on the NHANES Web site in the Laboratory Procedures Manuals.

Laboratory Quality Control and Monitoring	The NHANES quality assurance and quality control (QA/QC) protocols meet the 1988 Clinical Laboratory Improvement Act mandates. Detailed QA/QC instructions are discussed in the NHANES Laboratory/Medical Technologists Procedures Manual (LPM). Read the LABDOC file for detailed QA/QC protocols. A detailed description of the quality assurance and quality control procedures can be found on the NHANES website.				
Data Processing and Editing	Serum specimens are processed, stored, and shipped to the Division of Laboratory Sciences, National Center for Environmental Health, Centers for Disease Control and Prevention for analysis.				
	Detailed specimen collection and processing instructions are discussed in the NHANES Laboratory/Medical Technologists Procedures Manual (LPM). Vials are stored under appropriate frozen (–20°C) conditions until they are shipped to National Center for Environmental Health for testing.				
	All data are publicly available.				
	Detailed instructions on specimen collection and processing can be found at the NHANES web page.				
Analytic Notes	The second day exam data was a convenience sample and thus did not have sample weights. The analysis of NHANES 2001–2002 laboratory data must be conducted with the key survey design and basic demographic variables. The NHANES 2001–2002 Household Questionnaire Data Files contain demographic data, health indicators, and other related information collected during household interviews. The Household Questionnaire Data Files also contain all survey design variables required to analyze these data. The Phlebotomy Examination file includes auxiliary information on duration of fasting, the time of day of the venipuncture, and the conditions precluding venipuncture. The Household Questionnaire and Phlebotomy Exam files may be linked to the laboratory data file using the unique survey participant identifier SEQN. Please refer to the Analytic Guidelines for further details.				
	Please refer to the Analytic Guidelines for further details.				

- **References** 1. Instruction Manual, Diasorin (formerly Incstar) 25-Hydroxyvitamin D 125I RIA kit. Stillwater, (MN): Diasorin (formerly Incstar) Corporation, 1994.
 - 2. Chesney RW. Current Clinical applications of vitamin D metabolite research. Clin Orthop Rel Res 1981;161:285.
 - 3. DeLuca HF, Schnoes HK. Metabolism and mechanism of action of vitamin D. Annu Rev Biochem 1976;45:631.
 - 4. Clemens TE. Vitamin D: Recent advances in basic research and clinical assay methodology. J Clin Immunoass 1986;9(4):183.
 - 5. Preece MA, Tomlenson S, Ribot CA. Studies of vitamin D deficiency in man. Q J Med 1975;45:575.
 - Kruger DW, Lee J, Raines A, Lyne ED. Vitamin D metabolism and skeletal disease in pediatric populations. J Clin Immunoass 1986;9(4):200.
 - Hollis BW, Pittard WB. Relative concentrations of 25-hydroxyvitamin D2/D3 and 1,25-dihydroxyvitamin D2/D3 in maternal plasma at delivery. Nutr Res 1984;4:27.
 - 8. Hollis BW, Pittard WB. Evaluation of the total fetomaternal vitamin D relationships at term: evidence for racial differences. J Clin Endocrin Metab 1984;59(4):652.
 - 9. Lore F, DiCairano, Signorini AM, Caniggia A. Serum levels of 25hydroxyvitamin D in postmenopausal osteoporosis. Calcif Tissue Int 1981;33:467.
 - 10.Parfitt AM, Gallagher JC, Heaney RP, et al. Vitamin D and bone health in the elderly. Am J Clin Nutr 1982;36:101.
 - 11.Zerwehk JE, Sakhee K, Glass K, Pak C. Long term 25hydroxyvitamin D3 therapy in postmenopausal osteoporosis: demonstration of responsive and non-responsive subgroups. J Clin Endocrinol Metab 1983;56(2):410.

- 12.Decontamination of laboratory sink drains to remove azide salts. In: the manual guide-safety management, No. CDC-22. Atlanta: Centers for Disease Control, 1976.
- 13.Hollis BW, Kamerud JQ, Selvaag SR, Lorenz JD, Napoli JL. Determination of vitamin D status by radioimmunoassay with an 125I-labeled tracer. Clin Chem 1993;39(3):529-33.
- 14.Adams JS, Clemens TL, Parrish JA, Holick MF. Vitamin D synthesis and metabolism after ultraviolet radiation of normal and vitamin ddeficient subjects. N Eng J Med 1982;306(12):722.
- 15.Beadle PC, Burton JL, Leach JF. Correction of seasonal variation of 25-hydroxycalciferol with U.V. radiation dose. Br J Dermatol 1980;102:289.
- 16.Jacob AI, Sallman A, Santiz S, Hollis BW. Defective photoproduction of cholecalciferol in normal and uremic humans. J Nutr 1984;114:1313.

Locator Fields

Title: Vitamin D Second Day Exam

Contact Number: 1-866-441-NCHS

Years of Content: 2001–2002

First Published: October 2008

Last Revised: N/A

Access Constraints: None

Use Constraints: None

Geographic Coverage: National

Subject: Vitamin D Second Day Exam

Record Source: NHANES 2001–2002

Survey Methodology: NHANES 2001–2002 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)

Vitamin D Second Day Exam (VID_2_B) Person Level Data

October 2008



SEQN	Target					
	B(16 Yrs. to 69 Yrs.)					
Hard Edits	SAS Label					
	Respondent sequence number					
English Text: Respondent sequence number.						
English Instructions:						

LB2DAY		Target						
		B(16 Yrs. to 69 Yrs.)						
Hard Edits		SAS Label						
		Days between first and second exams						
English Text: Days between first and second exams								
English Instructions:								
Code or Value	I	Description	Count	Cumulative	Skip to Item			
3 to 45	Ra	nge of Values	469	469				
		Missing	82	551				

LB2VID		Target						
		B(16 Yrs. to 69 Yrs.)						
Hard Edits		SAS Label						
		Vitamin D (ng/mL)						
English Text: Vitamin D (ng/mL)								
English Instructions:								
Code or Value	I	Description	Count	Cumulative	Skip to Item			
3 to 61	Ra	nge of Values	469	469				
•		Missing	82	551				