

Vitamin D and Calcium Data from the National Health and Nutrition Examination Survey (NHANES)



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Presentation Objectives

- Provide a brief overview of NHANES
- Describe relevant NHANES calcium and vitamin D health interview, dietary, and biomarker data
- Review timetable for producing NHANES calcium and vitamin D data tabulations



Acknowledgement

Federal Data Work Group

- **U.S. Department of Agriculture:**
 - Agricultural Research Service
- **U.S. Department of Health and Human Services:**
 - CDC, National Center for Health Statistics
 - NIH, National Cancer Institute
 - NIH, Office of Dietary Supplements



National Health and Nutrition Examination Survey (NHANES)

Primary Objective of NHANES:

To assess the health and nutritional status of adults and children in the United States



NHANES

- National scope
- Continuous, annual survey since 1999
- Cross-sectional design
- Tracking for follow-up studies
- Data collection: Interview and health examination methods



NHANES Sample

- Civilian, non-institutionalized U.S. household population
- All ages
- National sample: 15 counties selected annually
- Approximately 5,000 persons interviewed & examined/yr
- Data release: 2-year cycles beginning with 1999-2000



Oversampled Population Subgroups in 1999-2006

- African Americans
- Mexican Americans
- Adults \geq 60 yr
- Adolescents 12-19 yr
- Pregnant women
- Low income white persons



NHANES Mobile Exam Center (MEC)



Household Interview Data

- **Dietary supplement use (1999-2006)**
 - Sample: All ages
 - Scope: Use in the past 30 days
- **Self-reported osteoporosis and fracture history (1999-2006)**
 - Sample: Adults \geq 20 yr
- **Sun protection behavior (2003-2006)**
 - Sample: Adults 20-59 years



Examination Component

24-hour Dietary Recall Data

- **Public Data: 1999-2006**
- **Sample: All ages**
- **“What We Eat in America”-- a partnership between USDA and DHHS since 2002**
 - USDA/ARS AMPM methodology
 - USDA/ARS technical files used
- **2 interviews per person since 2002**
 - In-person mode (Day 1)
 - Telephone interview mode (Day 2)



Examination Component Biomarker Data

- **Serum vitamin D**
- **Serum parathyroid hormone (PTH)**



Data Tabulations



CALCIUM intakes from foods, dietary supplements, and total intakes

- Mean (SE) intakes from foods based on 1-day recall data: tabulated for 1999-2006
- Distribution of usual intakes from foods: Tabulated for 2001-2002; 2003-2006 (Summer).
- Mean (SE) intakes from dietary supplements and comparisons with the AI: 2003-06 (Spring)
- Distribution of total usual intakes from foods and dietary supplements: 2003-06 by (Spring)



Vitamin D intakes from foods, dietary supplements, and total intakes

- Updated USDA vitamin D food composition data
- 1-day mean (SE) intakes from foods: 2005-2006 (August); 2003-2006 (late Fall)
- Distribution of usual intakes from food: 2005-2006 (August); 2003-2006 (late Fall)
- Mean (SE) intakes from dietary supplements and comparisons with AI and UL: Spring
- Distributions of total usual intakes from foods and dietary supplements: 2005-2006 (Summer) and 2003-2006 (late Fall)



Biomarker Data: Serum vitamin D

- **Lab Method: Diasorin 25-OH vitamin D assay**
- **Eligible sample:**
 - Ages \geq 6 yr: 2000-2002
 - Ages \geq 1 yr: 2003-2006
- **NHANES 2000-2004 data published**
- **Additional tabulations will be produced**



Biomarker Data: Serum Parathyroid Hormone (PTH)

- **Public Data: 2003-2006**
- **Lab Method: ECL/Origen electrochemiluminescent**
- **Eligible sample ≥ 6 yr**
- **Tabulations of means (SE) and percentiles: Spring and Summer**





<http://www.cdc.gov/nchs/nhanes.htm>