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 ≥ 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
- 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 $\geq 6$ yr
- Tabulations of means (SE) and percentiles: Spring and Summer
http://www.cdc.gov/nchs/nhanes.htm