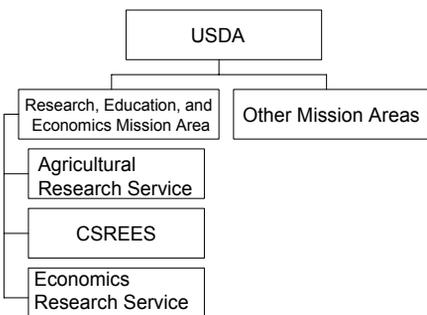


Agricultural Research Service National Program in Human Nutrition

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Human Nutrition Research Centers

- **Human Nutrition Research Centers**
 - ◆ Arkansas Children's Nutrition Research Center (Little Rock)
 - ◆ Beltsville Human Nutrition Research Center
 - ◆ Children's Nutrition Research Center (Baylor, Houston)
 - ◆ Grand Forks Human Nutrition Research Center (ND)
 - ◆ Human Nutrition Research Center on Aging (Tufts, Boston)
 - ◆ Western Human Nutrition Research Center (Davis, CA)
- **Plant, Soil and Nutrition Laboratory (Ithaca, NY)**
- **Lower Mississippi River Delta/Nutrition Intervention Research Initiative**

Program Overview

- Total Budget is approximately \$75M
- Overall mission is to define “What is a healthy diet?”
- Consistently has had a foods based approach to the study of nutrition
- Ability to conduct large scale feeding studies
- Ability to study nutritional needs over the entire life cycle
- Long standing interest in calorimetry and body composition studies

Arkansas Children’s Nutrition Center

- The mission of the Arkansas Children's Nutrition Center is:



- to determine the effects of early dietary factors (phytochemicals) on the long-term health consequences of children.
- to conduct research to examine the effects of nutrition and diet on central nervous system development and function of infants and children

Arkansas Children’s Nutrition Center

- Effects of dietary factors on prevention of atherosclerosis

Beltsville Human Nutrition Research Center



■ The mission of BHNRC is:

to define the role of foods and its components in optimizing human health and reducing the risk of nutritionally related disorders in the diverse population to understand how dietary factors interact with genetic, physiological, sociological and environmental factors to affect the health of the U.S. Population so diversified by ethnicity, gender, lifestyle, and environment.

Beltsville Human Nutrition Research Center

- Influence of physical activity on long-term food intake and body weight
- Beneficial effects of fiber
- Nutrition monitoring
- Nutrient Composition
- Community based interventions
- Insulin potentiating compounds

Children's Nutrition Research Center

The mission of CNRC is:



to define the dietary needs that will assure health in pregnant and lactating women and in children from conception through adolescence

Children's Nutrition Research Center

- Genetic and environmental factors contributing to childhood obesity
- Biological influences on children's diets
- Eating patterns
- Athletic self concept and behavior
- After school physical activity
- Dietary interventions for children and families
- Infant feeding patterns and risk factors for CVS and DM

Grand Forks Human Nutrition Research Center

■ Mission:

To serve the public through research to determine nutrient needs for humans and to provide information concerning healthy food choices and a healthful food supply.



Emphasis is on determining mineral requirements that prevent disease, and promote health and optimal function throughout life.

Grand Forks Human Nutrition Research Center

- Mineral element requirements for optimal cardiovascular function and health

Human Nutrition Research Center on Aging

The mission of HNRCA is:

to explore the relationship
between nutrition, aging,
and health.



Human Nutrition Research Center on Aging

- Lipoproteins, nutrition, and aging
- Aging adipocyte and systemic metabolism
- Body composition and nutritional assessment in the elderly
- Nutrition, CVD, and genomics
- Epidemiology applied to problems of aging and nutrition
- Improving cardiovascular health with diet
- Geisinger rural aging study
- Determination of energy and insulin regulation

Western Human Nutrition Research Center

■ Mission of WHNRC:

Create and test nutrition
interventions to improve
health,

Assess how an individual's
environment and genetics
affects those interventions,
and provide reliable and
reproducible research
results for developing
national nutrition policies.



Western Human Nutrition Research Center

- Internal and external factors affecting food intake and body weight
- Energy restriction, mineral homeostasis and functional outcomes

General Issues Related to Obesity Research in ARS

- Foods based approach
- Obesity prevention
- Conduct research that provides scientific basis for sound food assistance programs

Future Research Directions - Phase I

- Establish community cohorts to determine risk factors in vulnerable population groups
- Determine behavioral and lifestyle influences on food choices, meal patterns, purchasing, family environment, etc.
- Determine effects of program participation on choices and behaviors
- Establish/refine methods to assess dietary practices and quality

**Future Research Directions -
Phase II**

- Longitudinal follow-up study of Phase I participants to determine how factors identified in Phase I predict weight change and body composition over time

**Future Research Directions -
Phase III**

- Test intervention strategies to identify features of effective programs and household and individual food choices
