

## Your Tax Dollars at Work in USDA-ARS

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## ARS National Programs

- **Nutrition, Food Safety/Quality**
  - Human Nutrition
  - Food Safety
  - Product Quality and New Uses
- **Animal Production and Protection**
  - Food Animal Production
  - Animal Health
  - Veterinary, Medical, and Urban Entomology
  - Aquaculture
- **Crop Production and Protection**
  - Plant Genetic Resources, Genomics and Genetic Improvement
  - Plant Diseases
  - Crop Protection and Quarantine
  - Crop Production
- **Natural Resources and Sustainable Agricultural Systems**
  - Water Availability and Watershed Management
  - Soil and Air
  - Biorefining
  - Grass, Forage, and Rangeland Agroecosystems
  - Sustainable Agricultural Systems Research

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## The purposes of agriculture

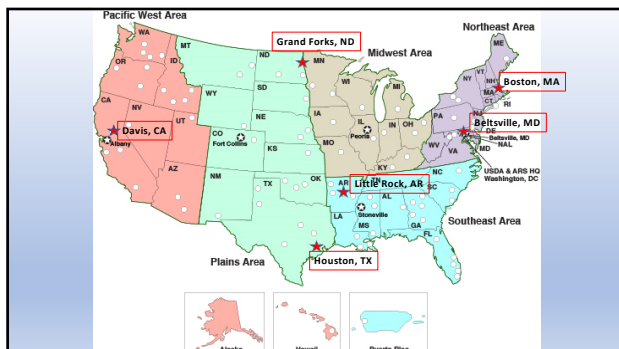
- Feed people (and animals, most of which are for human food) ~85-90%
- Clothe people ~5%
- Housing products ~1%
- (Biofuels) ~5%
- Landscaping parks & public spaces, house plants, cut flowers, medicinal plants, all other uses ~3%

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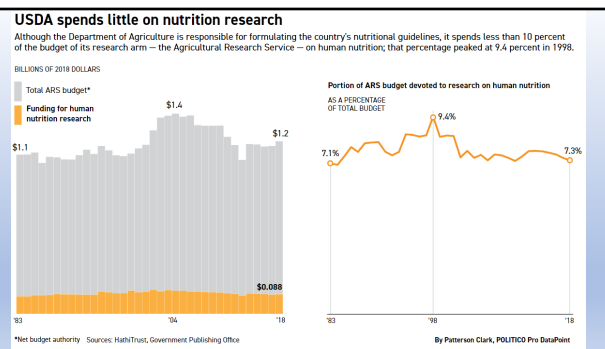
## Human Nutrition Research in ARS

- Authority for human nutrition research provided in the Organic Act of 1862 establishing USDA
- W.O. Atwater, PhD, Director of USDA Office of Experiment Stations, 1894. Considered father of modern human nutrition research. Invented the indirect, room calorimeter.
- National Agricultural Research, Extension, and Teaching Policy Act of 1977 designated USDA as the **lead Federal department for human nutrition research**, except for treatment of disease.

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## Human Nutrition Action Plan Components 2019-2024

- 1) Linking Agricultural Practices and Beneficial Health Outcomes
- 2) Monitoring Food Composition and Nutrient Intake of the Nation
- 3) Scientific Basis for Dietary Guidance
- 4) Prevention of Obesity and Obesity-Related Diseases
- 5) Life Stage Nutrition and Metabolism

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**The USDA Branded Food Products Database:  
A Public-Private Partnership**



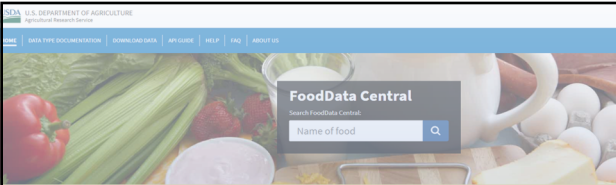



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## Branded Food Products Database

- Available September 16, 2016
- On September 15, the Standard Reference database contained ~ 9,000 items; appx ¼ branded foods
- Today the BFPD contains ~ 280,000 foods
- Label information; some products have additional manufacturer-supplied information
- Date stamps to know when products are in/out of commerce
- Required complete rebuild/modernization of database infrastructure

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**FoodData Central**

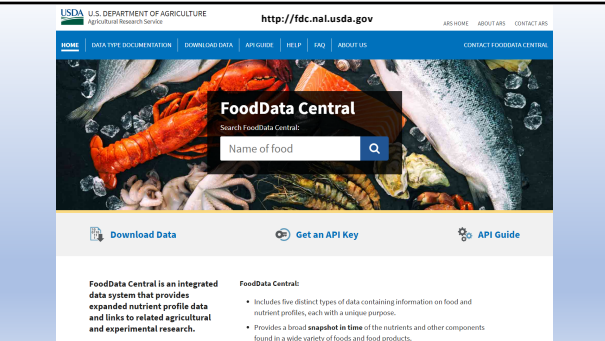
Search FoodData Central:  
Name of food

Download Data | Get an API Key | API Guide

- One-stop shopping for food composition from multiple databases:
  - SR Legacy
  - Branded Foods Products Database
  - Foundation Foods
  - Food and Nutrient Database for Dietary Studies (WWFIA/NHANES)
  - (Experimental Foods; foods grown experimentally but not for public consumption)

FoodData Central:  
Includes five distinct types of data containing information on food and nutrient profiles, each with a unique purpose:  
• Foundation Foods: Includes information on foods that are commonly consumed in the United States.  
• SR Legacy: Includes information on foods that are commonly consumed in the United States.  
• Branded Foods Products Database: Includes information on foods that are commonly consumed in the United States.  
• Food and Nutrient Database for Dietary Studies (WWFIA/NHANES): Includes information on foods that are commonly consumed in the United States.  
• (Experimental Foods; foods grown experimentally but not for public consumption): Includes information on foods that are commonly consumed in the United States.

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**FoodData Central**

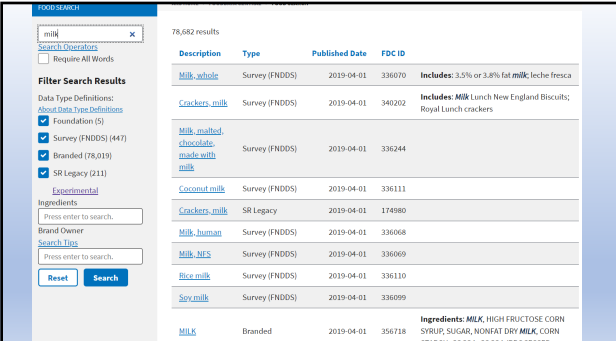
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FoodData Central is an integrated data system that provides expanded nutrient profile data and links to related agricultural and experimental research.

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**FOOD SEARCH**

Search:  X

Require All Words

**Filter Search Results**

Data Type Definitions:  
About Data Type Definitions

Foundation (5)  
Survey (FNDDS) (447)  
Branded (78,019)  
SR Legacy (211)

Experimental

Ingredients  
Press enter to search.

Brand Owner  
Press enter to search.

Search Tips  
Press enter to search.

Reset Search

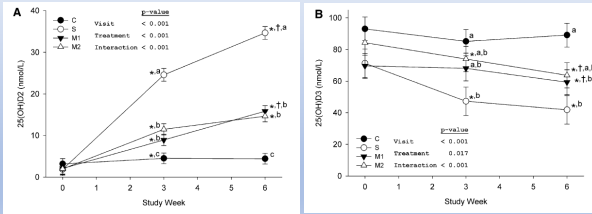
78,682 results

Description	Type	Published Date	FDC ID	Includes:
Milk, whole	Survey (FNDDS)	2019-04-01	336070	Includes: 3.5% or 3.8% fat milk, leche fresca
Crackers, milk	Survey (FNDDS)	2019-04-01	340202	Includes: MILK Lunch New England Biscuits; Royal Lunch crackers
Milk, malted, chocolate, made with milk	Survey (FNDDS)	2019-04-01	336244	
Coconut milk	Survey (FNDDS)	2019-04-01	336111	
Crackers, milk	SR Legacy	2019-04-01	174980	
Milk, human	Survey (FNDDS)	2019-04-01	336068	
Milk, NFS	Survey (FNDDS)	2019-04-01	336069	
Rice milk	Survey (FNDDS)	2019-04-01	336110	
Soy milk	Survey (FNDDS)	2019-04-01	336099	
MILK	Branded	2019-04-01	356718	Ingredients: MILK, HIGH FRUCTOSE CORN SYRUP, SUGAR, NONFAT DRY MILK, CORN STARCH, COCOA, COCOA PROCESS

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### Vitamin D2 and D3 Blood Levels



CB Stephensen et al, J Nutr, 142:1246, 2012

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### Dietary Guidelines for Americans 1980 - 2015

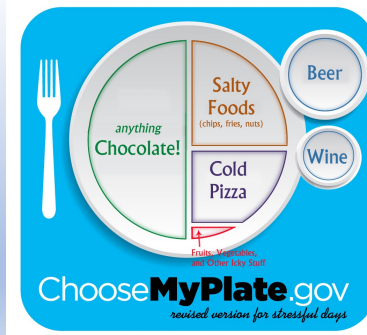


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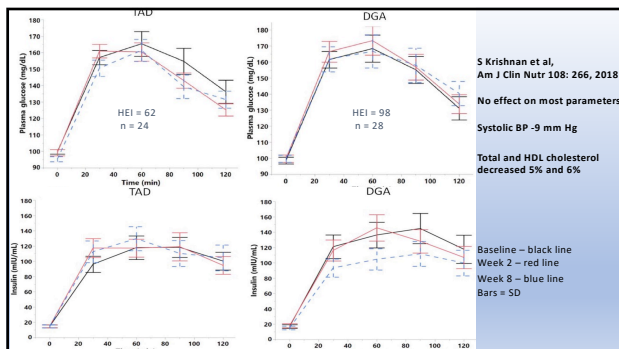
### Dietary Guidelines for Americans

- Recommends low fat, low sugar, whole grains, fruits, vegetables based mostly on observational associations
- Does not recommend a specific calorie target
  - Assumes eating "higher quality" foods will result in lower intake
- Never tested in a direct study until recently
- First study in overweight women
  - DGA diet compared to TAD
  - Designed to maintain weight
  - All foods provided for 8 weeks

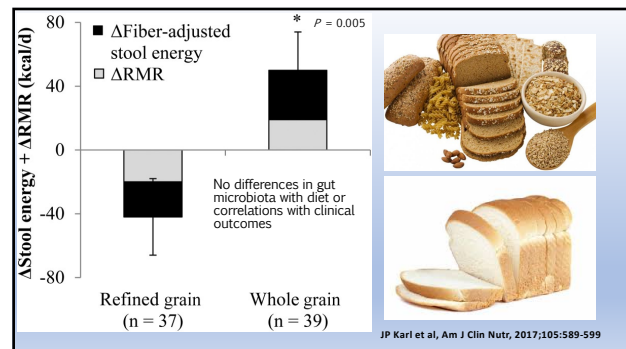
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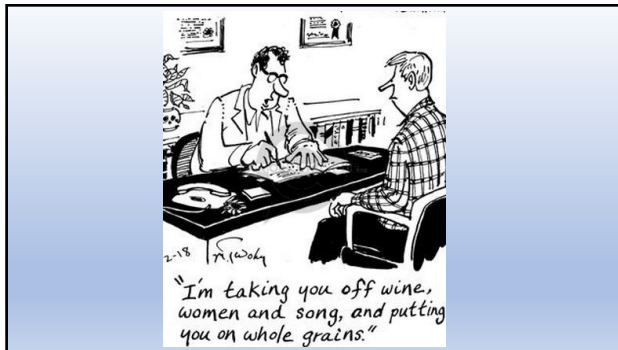


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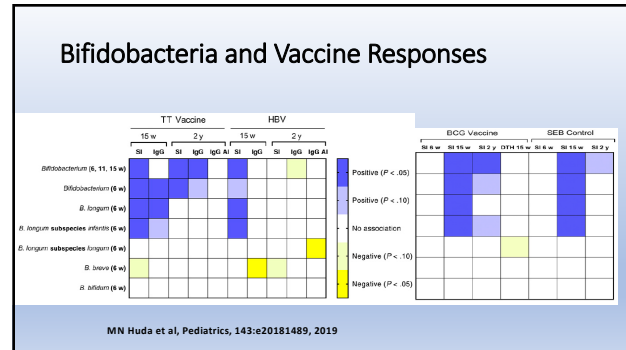


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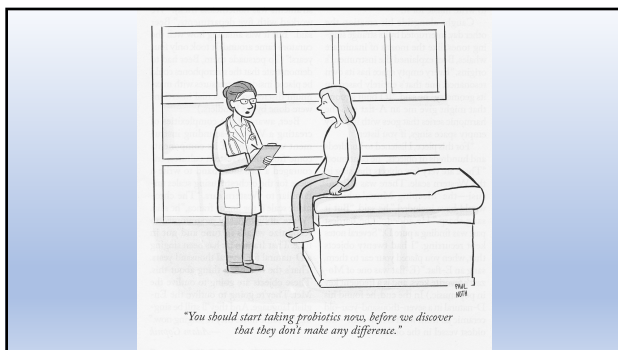




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