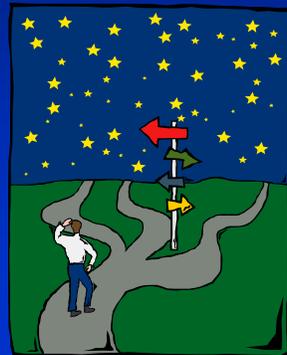


# Aligning Food Composition Tables with Current Dietary Guidance for Consumers

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## Dietary Guidance for Consumers

- Several updates and changes in the past 1-2 years
- How will these changes affect developers and users of food composition tables?



## **What types of dietary guidance are available to consumers?**

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- Dietary Reference Intakes (nutrient standards)
- Dietary Guidelines for Americans (food-based guidance)
- Labels on food products

## **What types of dietary guidance are available to consumers**

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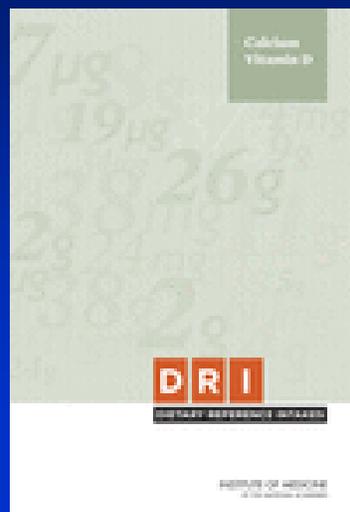
- Dietary Reference Intakes (nutrient standards)

## Nutrient goals for the US are based on Dietary Reference Intakes (DRIs)



- Set by the National Academy of Sciences, Institute of Medicine
- Recommended intake levels for vitamins, minerals, and macronutrients
- Issued from 1997-2010

## New DRIs: Calcium, vitamin D



Released  
November, 2010

## What types of dietary guidance are available to consumers?

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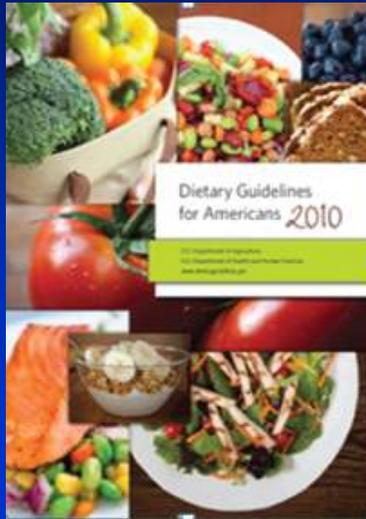
## Food-based dietary guidelines

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- Designed to help consumers choose healthy diets that:
  - Are nutritionally adequate (but not excessive)
  - Reduce risk of chronic disease

## U.S. Dietary Guidelines 2010

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## Guidelines are often accompanied by food guides

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- Food guides have been particularly helpful
- A long history of food guides in the US

## 2005 MyPyramid



## 2011 MyPlate



## What types of dietary guidance are available to consumers?

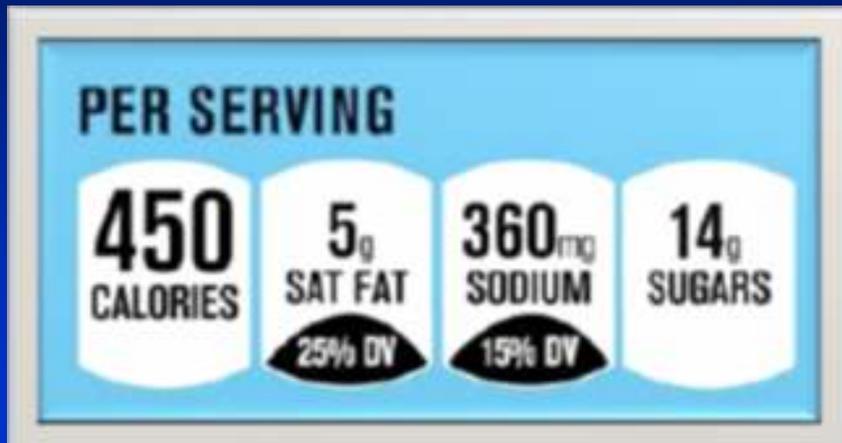
- Dietary Reference Intakes (nutrient standards)
- Dietary Guidelines for Americans (food-based guidance) and food guides based on DGA
- Labels on foods

## Nutrition Facts Label: Not changed—yet!

<b>Nutrition Facts</b>	
Serving Size 172 g	
Amount Per Serving	
Calories 200	Calories from Fat 8
<b>% Daily Value*</b>	
<b>Total Fat</b> 1g	1%
Saturated Fat 0g	1%
Trans Fat	
<b>Cholesterol</b> 0mg	0%
<b>Sodium</b> 7mg	0%
<b>Total Carbohydrate</b> 36g	12%
Dietary Fiber 11g	45%
Sugars 6g	
<b>Protein</b> 13g	
Vitamin A 1% • Vitamin C 1%	
Calcium 4% • Iron 24%	

\*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher.

## Front of Package Labeling



## Front of package information on packaged foods

- Guidelines for FOP information were released in October, 2011.
- Suggest showing calories plus up to 3 checkmarks for **saturated fat, sodium, and added sugars**.
- Next step is evaluation by the US Food and Drug Administration.

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## How will these changes affect food composition tables???

## Dietary guidance addresses many public health concerns

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- Of particular importance:
  - Determining nutrient adequacy
  - Reducing risk of overweight/obesity
  - Reducing risk of chronic diseases
- How can food composition tables be aligned with the new guidance in these areas?

## Aligning FCT with current guidance

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- May involve:
  - Adding new variables to the FCT
  - Calculating new variables based on the FCT variables

## Determining nutrient adequacy

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- FCT variables:
  - Ensure vitamins and minerals are carried in units that match the DRIs (vitamin A in RAE, folate in DFE, vitamin E in alpha-tocopherol)
  - Consider adding vitamin D
- Calculated variables:
  - Update standards for calcium and vitamin D; now have EARs and RDAs for these nutrients

## How do consumer learn about nutrient adequacy?

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- Primary communication tool is the Nutrition Facts label—but the Daily Values have not yet been updated.
- Food guides are the primary educational tool for consumers!

## What needs to be on a food composition table?

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- Food group assignments from the MyPyramid Equivalents Database (**MPED**)!
- Soon to become the Food Patterns Equivalent Database (**FPED**)
- Contains:
  - MyPyramid food group amounts in each food item
  - Vegetable subgroup amounts in each food item
- **New addendum:**
  - Whole fruit vs fruit juice indicators
- **Coming soon:** red-orange veg



## **Calculated variables**

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- Intakes from each food group can be calculated by the assessment program
- Comparison to recommended number of servings from each food group
- Adherence to USDA food patterns can ensure nutrient adequacy
- See SuperTracker for examples

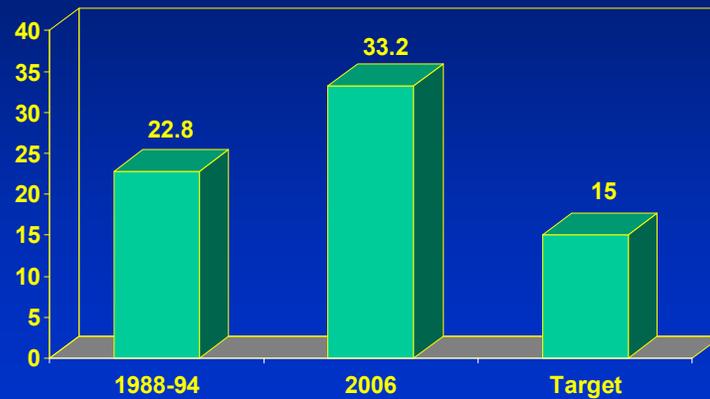
## **Reducing the risk of obesity: What FCT variables are of interest?**

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- “Empty Calories” or SoFAS
- Nutrient density
- Energy density

All of these are presented in the 2010 Dietary Guidelines

## % of adults in the US who are obese



Healthy People 2010 Overweight/Obesity Goals

## 2010 US Dietary Guidelines Advisory Committee Report

- Significantly reduce intake of foods containing **added sugars and solid fats (SoFAS)** because these dietary components contribute excess calories and few, if any, nutrients.

## **Calories from solid fats and added sugars (SoFAS)**

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- Currently, SoFAS (empty calories) provide **35%** of calories in the American diet
- Only **5 to 15%** of calories from SoFAS can be accommodated in healthy diets
- Variables for solid fats and added sugars in each food should be carried on FCTs. They are available on the MPED.
- New FOP proposal from IOM gives further importance to added sugars.

## **“Nutrient Dense” is a key term in the 2010 Dietary Guidelines**

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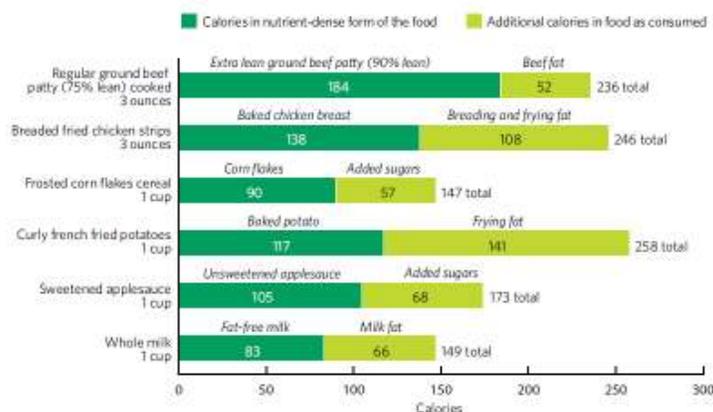
- Foods and beverages that provide vitamins, minerals, and other beneficial substances and relatively few calories.
- All vegetables, fruits, whole grains, seafood, eggs, beans and peas, unsalted nuts and seeds, fat-free & low-fat dairy, and lean meats & poultry are nutrient dense when prepared without solid fats or sugars

## Can nutrient density be quantified on a FCT?

- Could be calculated as nutrient to calorie ratio
- For example, calcium per 100 kcal:
  - Skim milk: 355 mg/100 kcal
  - Ice cream: 65 mg/100 kcal
- Could also be calculated by dietary assessment programs

## Nutrient Dense and Non-Nutrient Dense Forms of Sample Foods

**FIGURE 5-2. Examples of the Calories in Food Choices That Are Not in Nutrient Dense Forms and the Calories in Nutrient Dense Forms of These Foods**



## Energy density is another variable of interest

- Calculated as the energy per gram of a food or a diet
- Lowering energy density was recommended by the DGA Committee and by the AICR/WCRF report on Diet, Physical Activity, and Cancer
- Volumetrics approach by Barbara Rolls

The advertisement features the 'Nutrition Action' logo at the top, with the tagline 'HEALTHY CHOICES. BETTER FOR YOU. BETTER FOR THE PLANET.' Below the title 'Don't Be Dense', the subtitle reads 'Trim calories per bite to trim pounds.' Two meals are shown: a 'Typical diet' consisting of a large burger, fries, and a large drink, and a 'Healthier diet' consisting of a smaller burger, a side salad, and a smaller drink. The text at the bottom explains that both meals contain 500 calories but the healthier diet is more filling.

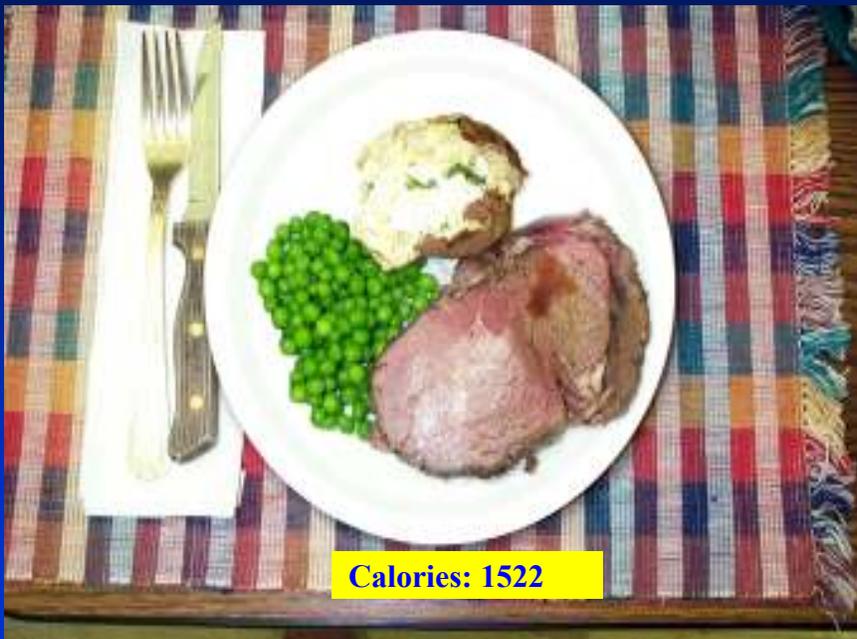
**Don't Be Dense**  
Trim calories per bite to trim pounds.

Typical diet

Healthier diet

A small portion of fried chicken, a few fries, and a cup of soda have 500 calories. So do a bowl of mixed greens, a chicken sandwich, a side salad, and a small cup of soda. Which diet is likely to help you feeling like tonight?

**Pictures of  
two meals;  
both have  
500  
calories!**



Calories: 1522



Calories: 472

## What's needed on the FCT to calculate energy density?

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- The variables are already on the FCT (calories and gram weight)
- Requires accumulating the weight of the food in a diet, which is not always done by dietary assessment programs
- Issues about whether to include beverages, and if so, which ones

## Reducing the risk of chronic disease: What FCT variables are of interest?

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- Many relevant variables are already present:
  - Sodium/potassium for hypertension
  - Fatty acids for heart disease and possibly other diseases: omega-3, trans fatty acids, saturated fat
- Some measure of carbohydrate quality; may affect risk of diabetes and GI cancers

## Carbohydrate quality was another focus of the 2010 DG

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- Dietary guidelines:
  - New: Limit the consumption of foods that contain refined grains
  - Consume at least half of all grains as whole grains
  - Reduce intake of calories from added sugars
- Note that Glycemic Index and Glycemic Load are not used by the DG

## What variables need to be on a FCT?

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- Corresponding food group categories:
  - Refined grains
  - Whole grains
  - Added sugars
- Available on the MPED

## Summary

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- Users of food composition tables will want variables that go beyond an array of traditional nutrients in order to:
  - Support dietary guidance messages for consumers who use FCTs
  - Evaluate adherence with these messages
- These new variables have the potential to enhance the usefulness of the FCT in studying diet and health.