So Long Food Pyramid: Impact of the Updated 2015 Dietary Guidelines for Americans

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Global Medical Communications
Biogen
Learning Objectives

1. Describe the importance of diet and nutrition in health

2. Describe the importance of involving pharmacists to improve nutrition

3. Compare and communicate changes of the 2015 dietary guidelines from previous versions

4. Educate others on how to incorporate nutrition recommendations into daily life
Pharmacy and Nutrition

Pharmacy organizations promote nutrition education

2012, 1981
Pharmacist Training in Nutrition
1. APhA advocates that all pharmacists become knowledgeable about the subject of nutrition.
2. APhA encourages schools and colleges of pharmacy as well as providers of continuing pharmacy education to offer education and training on the subject of nutrition.

Standard 2: Essentials for Practice and Care
2.3. Health and wellness – The graduate is able to design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.
Shift Focus to Prevention

Nutrition is a major behavioral aspect that can affect chronic disease.

Half of Americans have ≥ 1 chronic condition.

Chronic conditions “are among the most common, costly, and preventable of all health problems.”

Preventable behaviors that cause a majority of illness related to chronic diseases and include:

- lack of physical activity
- poor nutrition
- tobacco use
- drinking too much alcohol

84% of healthcare spending is on chronic conditions.

Chronic Disease Overview. Centers for Disease Control. 2015.
Aim of the Dietary Guidelines

Provide evidence-based food and beverage recommendations to:

• Promote health
• Prevent chronic disease
• Help people reach and maintain a healthy weight

The first Guidelines were published in 1980
Chronic Conditions with a Nutritional Origin: An Example

Obesity
Obesity Trends* Among U.S. Adults
BRFSS, 1985
(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)

BRFSS= Behavioral Risk Factor Surveillance System
Obesity Trends* Among U.S. Adults
BRFSS, 1986

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)

BRFSS= Behavioral Risk Factor Surveillance System
Obesity Trends* Among U.S. Adults

BRFSS, 1987

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BRFSS= Behavioral Risk Factor Surveillance System
Obesity Trends* Among U.S. Adults

BRFSS, 2002

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Obesity Trends* Among U.S. Adults

BRFSS, 2003

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BRFSS= Behavioral Risk Factor Surveillance System
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BRFSS = Behavioral Risk Factor Surveillance System
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Despite Guidelines designed to improve health, obesity continues to grow
Consequences of Obesity

- Hypertension
- Heart Attack
- Stroke

- Type 2 Diabetes

- Psychological Stress
- Depression

- Acid Reflux
- Fatty Liver
- Gallstones

- Cancer: Including endometrial, breast, kidney, liver, and colon

Annual medical costs $1,429 higher than those for people of normal weight

Obesity and overweight. World Health Organization. January 2015.;
Causes of Obesity

Obesity is caused by an imbalance of calories consumed and expended.

Calories Consumed

Calories Expended

Is the Problem Exercise, Diet, or Both?

Obesity is driven mainly by changes in energy intake—diet


Pharmacists on the *Phront* Line

“Patients are insufficiently counseled about the need for lifestyle changes... pharmacists could...fill this void” – Heaton, 2003

- Use of nutritional brochures
- Incorporate nutrition at each counseling
- Create group health programs
- Make nutrition a component of residency training
- Increase efforts to study pharmacist intervention on nutrition

Be a Public Health Pharmacist

Quiz: What factors are linked with increasing chronic disease?

A. Lack of physical activity
B. Poor nutrition
C. Tobacco use
D. Drinking too much alcohol
E. All of the above
History of the Dietary Guidelines
History of the Dietary Guidelines

1977: Dietary Goals for Americans first recommended

1980: First Dietary Guidelines released
1980: First Guidelines Released

- Shifted focus from nutrients to avoiding excessive intake of food components

1980:
- Issued jointly by the Department of Health and Human Services (HHS) and US Department of Agriculture (USDA)

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1985: First Advisory Committee

Updates:
- Use of the “Dietary Guidelines Advisory Committee”
- No changes in the seven principles

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1990: First Quantitative Recommendations

Nutrition Updates:

• Same basic tenets from previous versions, different wording

• Included quantitative recommendations for intake of dietary total and saturated fat
  – 30% Calories from Total Fat
  – 10% Calories from Saturated Fat

1977: Dietary Goals for Americans first recommended

1980: First Dietary Guidelines released

1985: 2nd Edition of Dietary Guidelines released

1990: 3rd Edition released

1995: 1st mandated guideline; Food Pyramid included
1995: Highlighting Good Food Sources

Process Updates:
- First mandated report
- First use of technical reports from the Advisory Committee

Nutrition Updates:
- Similar concepts from previous versions
- Food Guide Pyramid (1992)
- Nutrition Facts label (1990)

2000: Separating Key Messages

**Nutritional Updates:**

- Kept Food Pyramid
- Included 3 additional key messages:
  - Broke out physical activity
  - Split grains and fruits/vegetable recommendations
  - Added new guideline for safe food handling

1977: Dietary Goals for Americans first recommended

1980: First Dietary Guidelines released

1985: 2nd Edition of Dietary Guidelines released

1990: 3rd Edition released

1995: 1st mandated guideline; Food Pyramid included

2000: 5th edition released

2005: New systematic approach; MyPyramid included

2005: First Policy Document

Process Updates:
- Used a modified systematic approach
- Created 80-page policy document
- Provided consumer-friendly brochure

Nutrition Updates:
- Similar recommendations but increased guidance on food types and proportions
- Introduced MyPyramid Food Guidance System

1977: Dietary Goals for Americans first recommended

1980: First Dietary Guidelines released

1985: 2nd Edition of Dietary Guidelines released

1990: 3rd Edition released

1995: 1st mandated guideline; Food Pyramid included

2000: 5th edition released

2005: New systematic approach; MyPyramid included

2009: Nutrition Evidence Library established

2011: MyPlate introduced

2010: Increasingly Comprehensive Review

Process Updates:
- Use of the ‘Nutrition Evidence Library’
- Use of web-based public comments database
- 95-page policy document
- Includes call to action to various sectors of influence

Nutrition updates:
- Similar recommendations for general public from 2005
- MyPlate icon released

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2009: Nutrition Evidence Library established

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2011: MyPlate introduced

2014: DGAC Scientific Report submitted
Quiz: In what Guideline was the use of systematic reviews implemented?

A. 1985
B. 1990
C. 1995
D. 2000
E. 2005
Consequences of the Guidelines

• All Federal dietary guidance publications must be consistent with the *Dietary Guidelines*

• Used to inform USDA and HHS food programs
  – USDA's National School Lunch Program and School Breakfast Program
  – Special Supplemental Nutrition Program for Women, Infants and Children
  – Older Americans Act Nutrition Services
  – Department of Veterans Affairs

Nearly 40 million people are directly affected by the Guidelines.
2015 Methodology

1. Advisory Committee reviewed the science
   - Systematic reviews using the Nutrition Evidence Library
   - Data analyses
   - Modeling analyses

2. Submitted report to HHS and USDA
   - Public comments
   - Independent peer review
   - Federal agency review

3. To be implemented
   - Provides policy for all Federal food programs and health education campaigns
## 2015 DGAC Report Controversy

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<th>2010 Guideline</th>
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<td><strong>Added Sugars</strong></td>
<td>• Maximum of 10% of total daily calories</td>
<td>• “Reduce the intake of calories from … added sugars”</td>
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<td>• Taxation</td>
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<td><strong>Cholesterol</strong></td>
<td>• “not a nutrient of concern for overconsumption”</td>
<td>• Less than 300 mg per day</td>
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<td><strong>Environmental Sustainability</strong></td>
<td>• “Plant-based foods…is associated with less environmental impact”</td>
<td>• N/A</td>
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<td><strong>“Red and processed meat”</strong></td>
<td>• Reduce consumption of “red and processed meat”</td>
<td>• “Reduce the intake of calories from … solid fats”</td>
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Advisory Report to the USDA and HHS. Dietary Guidelines Advisory Committee. 2015.
The Guidelines

1. **Follow a healthy eating pattern across the lifespan.** All food and beverage choices matter. Choose a healthy eating pattern at an appropriate calorie level to help achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic disease.

2. **Focus on variety, nutrient density, and amount.** To meet nutrient needs within calorie limits, choose a variety of nutrient-dense foods across and within all food groups in recommended amounts.

3. **Limit calories from added sugars and saturated fats and reduce sodium intake.** Consume an eating pattern low in added sugars, saturated fats, and sodium. Cut back on foods and beverages higher in these components to amounts that fit within healthy eating patterns.

4. **Shift to healthier food and beverage choices.** Choose nutrient-dense foods and beverages across and within all food groups in place of less healthy choices. Consider cultural and personal preferences to make these shifts easier to accomplish and maintain.

5. **Support healthy eating patterns for all.** Everyone has a role in helping to create and support healthy eating patterns in multiple settings nationwide, from home to school to work to communities.
Guideline 1: Follow a Healthy Eating Pattern Across the Lifespan

• Eating patterns have a significant impact on health

• Healthy eating patterns are adaptable

Eating pattern is the combination of all the foods and beverages a person eats and drinks over time

Guideline 2. Focus on Variety, Nutrient Density, & Amount

• Healthy eating patterns include nutrient-dense forms of:
  – A variety of **vegetables**: dark green, red and orange, legumes (beans and peas), starchy, and other vegetables
  – **Fruits**, especially whole fruits
  – **Grains**, at least half of which are whole grains
  – Fat-free or low-fat **dairy**, including milk, yogurt, cheese, and fortified soy beverages
  – A variety of **protein** foods, including seafood, lean meats and poultry, eggs, legumes (beans and peas), soy products, and nuts and seeds
  – **Oils**, including those from plants (canola, corn, olive, peanut, safflower, soybean, and sunflower) and oils that are naturally present in foods (nuts, seeds, seafood, olives, and avocados)
Guideline 3. Limit Calories from Added Sugars & Saturated Fats & Reduce Sodium Intake

- Limit **added sugars** to less than 10% of total calories daily
- Limit **saturated fats** to less than 10% of total calories and limit **trans fats** to as low as possible
- Limit **sodium** to less than 2,300mg daily
- Limit **alcohol** to no more than 1 drink daily for women and no more than 2 for men

Guideline 4. Shift to Healthier Food & Beverage Choices

• Make dietary changes manageable

Don’t forget physical activity!
• 150 minutes moderate intensity per week
• Muscle strengthening on 2 or more days

Guideline 5. Support Healthy Eating Patterns for All

• YOU can help bring about healthy changes:
  – At **home**, in **schools**, at **work**, in the **community**
### Implemented from the DGAC

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| **Added Sugars**                  | • Maximum of 10% of total daily calories
• Taxation                        | • Less than 10% of calories per day
• “Greater access to healthy choices”                                         |
| **Cholesterol**                   | • “not a nutrient of concern for overconsumption”                               | • No quantitative limit                                                       |
| **Environmental Sustainability**  | • “Plant-based foods…is associated with less environmental impact”             | • Not included                                                                |
| **“Red and processed meat”**      | • Reduce consumption of “red and processed meat”                               | • Less than 10% of calories per day from saturated fats                      |

Other Controversies…

Conflicting messages—

– **Fat**
  - No limit on total fat but “should be eaten in small portions”

– **Nutrients**
  - Focus on healthy food patterns but only limits on nutrients

– **Sustainability**
  - Not included due to “scope of mandate”—yet physical activity included

  “All forms of foods…can be included in healthy eating patterns”

The New and the Good

Key message is to shift overall eating patterns

- Focus on healthy eating patterns
  - Not single nutrient nor single event is the culprit
- Mediterranean and Vegetarian eating patterns are healthy examples
- “All food and beverage choices matter”
- Moderate coffee is okay!

Advisory Report to the USDA and HHS. Dietary Guidelines Advisory Committee. 2015.
How to Implement in Practice

• Focus on shifting patterns to align with recommendations

• Create awareness

• Teach skills

• Model behavior

• Develop individualized plans

Case

• MH is a 44 yo female presenting at your clinic after referral from her physician with a diagnosis of diabetes

• Labs
  – 6.7 A1c
  – 125 FBG

• Medications
  – Atorvastatin 20mg qd
  – HCTZ 25mg BID
What do you do first?
Pathway to Change

Create a supportive environment → Assess knowledge and beliefs → Identify and prioritize behaviors to change

Develop concrete plans and provide encouragement → Reinforce actions and monitor → Follow up and prevent relapses

Quiz: What is one plan that would help MH control her diabetes and improve her health?

A. Read all ingredient labels to avoid any added sugar
B. Count calories daily to ensure she doesn’t overeat
C. Incorporate more nutrient dense fruits and vegetables into each meal
D. Start a ketogenic diet and increase fat intake
Summary

• Chronic disease is rising in America

• The 2015 Dietary Guidelines offer new approaches to improve nutrition
  – Focus on healthy food patterns, not single ingredients

• Pharmacists need to increase efforts to improve health by educating on nutrition