An In-Depth Look Into the Dietary Guidelines

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Disclosures

- Member of the Beef Checkoff Expert Bureau
- Member of the Beef Checkoff Nutrition Seminar Program
Today’s Objectives

Attendees will be able to:

① Understand the background on the Dietary Guidelines Advisory Committee report

② Understand the latest proposed changes recommended in the Dietary Guidelines Advisory Committee report

③ Provide nutrition professionals with ways they can communicate healthy eating messages to their clients
Part 1: The Backstory
The Reality

- About half of all Americans adults have one or more preventable chronic disease
  - 117 million individuals

- About 2/3 of US adults are overweight/obese
  - ~155 million individuals

- These conditions have been highly prevalent for >2 decades

- Poor dietary patterns, overconsumption of kcals, and physical inactivity directly contribute to these disorders
The Reality

- Individual nutrition & physical activity behaviors are strongly influenced by:
  - Individuals
  - Social surrounding
  - Organizational systems
  - Environmental systems

- Positive changes in all of the above could ultimately improve health outcomes
History of the Dietary Guidelines

- Published jointly: US Dept of Health & Human Services + USDA
- Intended for Americans ≥2 years
- The Dietary Guidelines Advisory Committee (DGAC):
  - Nationally recognized health & nutrition experts
  - Review, updated, and published every 5 years
- Scientific Report of the 2015 DGAC:
  - Written as the basis for developing the Dietary Guidelines for Americans policy
How the DGA Are Established

- Written comments until 5/8/15
- HHS and USDA hosted a public oral comment meeting on 3/24/15
- Release of official 2015 DGA?
Goals:

① Energy balance to avoid overweight
② Increase consumption of complex CHO and “naturally occurring sugars”
③ Reduce consumption of refined and processed sugars, total fat, sat fat, cholesterol, and sodium
④ Increase consumption of fruits, vegetables, & whole grains
⑤ Decrease consumption of
  - Refined and processed sugars
  - Foods high in total fat and animal fat
  - Eggs, butterfat and high-cholesterol foods
  - Salt and foods high in salt
  - Choose low-fat and non-fat dairy
## Recommendations Over 30 Years

<table>
<thead>
<tr>
<th>Year</th>
<th>Weight</th>
<th>Sugar</th>
<th>Fat</th>
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<tbody>
<tr>
<td>1980</td>
<td>Maintain ideal weight</td>
<td>Avoid too much</td>
<td>Avoid too much</td>
</tr>
<tr>
<td>1985</td>
<td>Maintain desirable weight</td>
<td>Avoid too much</td>
<td>Avoid too much</td>
</tr>
<tr>
<td>1990</td>
<td>Maintain healthy weight</td>
<td>Use only in moderation</td>
<td>Chose diet low in fat</td>
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<tr>
<td>1995</td>
<td>Improve your weight</td>
<td>Choose diet moderate in sugars</td>
<td>Choose diet low in fat</td>
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<tr>
<td>2000</td>
<td>Aim for a healthy weight</td>
<td>Choose foods to moderate sugar intake</td>
<td>Choose diet low in fat</td>
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<tr>
<td>2005</td>
<td>Manage body weight</td>
<td>No guidance</td>
<td>Choose fats wisely</td>
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<tr>
<td>2010</td>
<td>Balanced calories to manage weight</td>
<td>Reduce added sugars</td>
<td>Consume &lt;10% cals from sat fat</td>
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<tr>
<td>2015</td>
<td>?</td>
<td>?</td>
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## Why Are the Guidelines Important?

Dietary Guidelines address significant nutrition-related health issues facing the US population:

- Overweight, obesity and other diet-related chronic disease
  - CVD, Type 2 DM, cancer
- Less than optimal dietary patterns in the US
  - Contribute to poor pop health and high chronic disease risk
- Food insecurity
  - Availability of nutritionally adequate foods limited or uncertain
  - >49 million in US, including 9 million children
Why Are the Guidelines Important?

- Basis of federal nutrition policy, education, outreach, and food assistance programs
  - Used by consumers, industry, nutrition educators, and health professionals
- They influence the DG other countries will have
- All federal dietary guidance for the public is required to be consistent with the DG
  - School policy + school lunch program
  - SNAP
  - WIC
Dietary Guidelines for Americans: The Core of Nutrition Policy
Part 2. Proposed Changes
US Trends in Nutrient Intake & Health

Data from:
- **What We Eat in America** survey
  - Part of National Health and Nutrient Examination Survey
- Examination of health conditions that may have nutritional origins
Shortfall Food Groups

Under-consumed **food groups**:

- **Vegetables**: 90% of the US pop does not meet daily vegetable intake recommendations
- **Fruit**: Only 15% of US pop meets the daily fruit intake recommendation
- **Whole grains**: Across all ages and both sexes, nearly 100% of the pop consumes amounts below the recommended intake levels
- **Dairy**: Age-relate decline in intake from adolescents with more than 80% of the entire US pop not meeting the daily recommended dairy intake
Results in Nutrient Shortfalls

- Nutrients under-consumed relative to Estimated Average Requirements or Adequate Intake levels per IOM
  - Vitamins A, D, E, C, folate, calcium, magnesium, fiber, potassium
- Females (adolescent + pre-menopausal): iron
- Calcium, Vitamin D, fiber, potassium:
  - ‘nutrients of public health concern’
  - Underconsumption linked to adverse health effects
Recommendations for Shortfalls

Composition of many **food categories** can be improved to increase intake of vegetables, whole grains, and under consumed nutrients:

- i.e. burgers, sandwiches, desserts, beverages

Take advantage of more opportunities to enrich meal choices with important **food groups** in all settings:

- Home meals, restaurants, schools
Nutrients overconsumed relative to Tolerable Upper Intake Levels per IOM or maximum standards:

- Saturated fat
- Sodium
- Refined grains
- Added sugars

- 90% of males and females in all age groups exceed the recommended daily limits of solid fats and added sugars
- Nearly 100% of boys and girls ages 1-3 and 4-8 exceed recommended limit for solid fats and added sugars
Overconsumed Nutrients

Saturated Fat

- Limit to less than 10% of total calories per day
  - That’s 200 calories or 22 grams of saturated fat
- Replace saturated with unsaturated and especially polyunsaturated fats
  - i.e. avocado oil in place of butter

You can find saturated fat in many processed foods, so be sure to read food labels carefully.
Overconsumed Nutrients

Sodium

- Emphasize expansion of industry efforts to reduce sodium content of food
- Assist consumers in understanding how to flavor with herbs and spices
- Goal of < 2,300mg dietary sodium/day
Overconsumed Nutrients

Refined grains

- Refined grains: In the overall population for all ages and both sexes, more than 70% exceed recommendations.
  Intake particularly high among boys and girls ages 4 - 8 years and girls ages 9 - 13 years

- Recommends:
  Half of all grains should be whole
Overconsumed Nutrients

Added sugars

- Differentiate between added sugars vs naturally-occurring sugars
- Unintended consequences of over-focusing on sugar reduction:
  - May impact other macronutrient consumption
  - May impact consumption of less palatable nutrient-dense food

Recommends:
- Cut added sugar from 25% of total energy to 10%
  i.e.: maximum 200 calories of sugar on a 2,000 calorie diet
- Limit sweets and desserts
- Limit/remove sugar-sweetened beverages
Proposed new Nutrition Facts Panel
Does Where You Purchase Matter?

- The US purchases food for a variety of locations
  - Supermarket
  - Convenience stores
  - Schools
  - Workplace

- DGAC report determined no matter where food is obtained, the diet quality of the US pop does not meet the recommendations (the same over and under consumed nutrients and food groups)
Total Plate vs. Single Nutrient

- Individual components of food, like saturated fat or sugar, should not be demonized
- Look at the entire diet as a whole
- Ask client:
  - Are portions appropriate
  - Are there enough vegetables?
  - Are you skipping meals?
Meat Confusion

- Although the report states that Americans consume above the recommended daily amount of protein, protein intake is marginal with many groups.
  - As many as 45% of Americans >1 year fail to meet protein recommendations.

- It also suggested that a healthy dietary pattern is one that is “low in red and processed meat.”

- The report also noted that lean meat can be part of a healthy diet.

- This leaves a lot of confusion surrounded red meat.
Meat Confusion

The Committee reviewed evidence
- Variability of the food grouping, especially in the meat group

- For example, studies defined “total meat” as:
  - Study A: Meat, sausage, fish, and eggs
  - Study B: Red meat, processed meat, and poultry
  - Study C: Other combinations

- Lean meats were not consistently defined or handled similarly between studies, so could not be parsed out
Meat Facts

NHANES data reveals:

- 10% or less of saturated fat and total fat in the American diet comes from beef
- 5% of calories in the American diet come from beef
- Despite higher intakes of meat over the past several decades, reports indicate that the proportion in total and saturated fat from meat, poultry and fish has slowly declined

More Meat Facts

- The DG committee reported on sources of energy from certain food categories
- Beef makes up only 2.4% of energy from burger/sandwich category
Defining “Lean Meat”

- Over 66% of beef cuts meet the guidelines for “lean”
- Thanks to increased trimming practices, the external fat in retail cuts has decreased by 80% in the past 20 yrs
- Lean defined by USDA and FDA for food label use:
  - Less than 10% fat by weight, or less than 10g of fat/100 g

**Examples:**
- 95% lean ground beef, cooked
- Broiled beef steak, lean only eaten
- Baked pork chop, lean only eaten
- Roasted chicken breast or leg, no skin eaten
- Smoked/cured ham, lean only eaten
Cholesterol

“Available evidence shows no appreciable relationship between consumption of dietary cholesterol and serum cholesterol, consistent with the conclusions of the AHA/ACC report”

- Recommended 2015 guidelines not include previous recommendation to limit intake <300mg/day
- Cholesterol is not a nutrient of concern for overconsumption
Caffeine

- Previously unexamined area of ‘food safety’

- Evidence shows consumption of 3-5 cups of coffee/day (or up to 400mg/day caffeine) not associated with increased long-term health risks

- Consistency evidence indicates coffee consumption associated with reduced risk of diabetes (type 2) and CVD

- Moderate evidence for protective association between coffee intake and Parkinson's disease
Caffeine

- DGAC recommendation: “Moderate coffee consumptions can be incorporated into a healthy dietary pattern”

- Limited to no consumption of high-caffeine energy drinks for children and adolescents

- Be weary of:
  - Added calories (milk, cream, sugar, dairy substitutes)
  - Safety of high caffeine (>400mg/day) intake
  - Energy drinks + alcoholic beverage pairings
DGAC acknowledges that recommending reduction in added sugars may lead to their replacement by low-calorie sweeteners

DGAC recommendation: “at the level that the US population consumes aspartame, it appears to be safe.”

DGAC recommendation: “some uncertainty continues about increased risk of hematopoetic cancer in men, indicating need for more research”
Sustainability

- DGAC report suggests a diets higher in plant-based foods and lower in animal-based foods are more health promoting and associated with less environmental impact than the current US diets.

- Suggested lower environmental impact diets:
  - Healthy U.S. style-pattern
  - DASH
  - Mediterranean-style pattern
  - Vegetarian pattern

- Due to its higher intake of animal-based foods, the average US diet has a larger environmental impact (i.e. increasing greenhouse gases, land/water/energy use) compared to suggested diets.

- Note: no food group needs to be eliminated completely to improve sustainability.
Sustainability: Fish

- Seafood important part of several recommended dietary patterns
- Seafood industry rapidly expanding
- Safety concern of farm-raised vs wild-caught seafood – but both are needed in order to support meeting seafood recommendations
Part 3: Recommendations into Actions
How Should We Use the Guidelines?

- Gov’t use DG to develop research-based consumer messages for use by public and health educators
- The key to success in the DG lies in the ability to communicate them effectively to consumers
- Consumers want
  - Specific actions they can relate to, individualize and incorporate into their lifestyle
  - Positive information to keep them motivated to achieve a healthy diet and lifestyle
History of MyPlate

- 1940s: A Guide to Good Eating (Basic Seven)
- 1956-1970: Food for Fitness, A Basic Food Guide (Basic Four)
- 1979: Hassle Free Daily Food Guide
- 1984: Food Wheel- A Pattern for Daily Food Choices
History of MyPlate

- 1992: Food Guide Pyramid
- 2005: MyPyramid Food Guidance System
- 2011: MyPlate
My Plate

- A comprehensive nutrition communications initiative
- Meant to serve as a simple guide to help consumers choose healthful foods.

Provides visual reminders to help consumers make nutritious food choices and form healthful eating habits consistent with Dietary Guidelines.

- Latest update in response to a call to action from the **2010 White House Child Obesity Task Force** to provide simple, useful advice that consumers can easily understand.
ChooseMyPlate.gov

SuperTracker:

- interactive, online dietary assessment and planning tool based on age, gender and physical activity level
- Provides user-friendly tips and strategies for making smart choices from every food group
- Available in a variety of languages
Multi-Component Approach

- The Individual and family Level
- Communities
  - Food environment
  - Social environment
  - Cultural environment
  - Economics
- Industry and Government
  - Food access in the community
  - Food access at school/worksite/child care
  - Policy
Individual and Family Level

Behavior Change Strategies

- Reduce screen time
- Reduce frequency of eating out fast food
- Increase frequency of family shared meals
- Self-monitoring of body weight
- Effective food label reading to target healthy food choices
Motivating Parents to Make Positive Diet and Lifestyle Changes

Dietary Guideline Alliance research found these messages testes best among American families:

- Know your number
- Fun stuff counts as exercise
- Take charge of your weight
- Small steps = big changes
- Base your plate on nutrient-rich foods that offer beneficial nutrients and fewer calories
- You are an important role model for your children
Family Meals

- Promising behavior change strategies to favorably affect a range of health-related outcomes, enhance the effectiveness of interventions
  - Limited studies

Suggest: “frequent consumption of family meals was associated with improved dietary intake, specifically an increase in fruits and/or vegetables, and calcium-rich or milk-based foods”
Communities

- Food environment
  - Facilitate access to healthy food

- Social environment
  - Address nutrition-related health problems (i.e. obesity/overweight, CVD, type 2 DM)

- Cultural environment
  - Immigrants at risk of losing healthier dietary patterns characteristic of their cultural background

- Economics
  - Facilitate access to affordable food
Industry and Government

- Create/modify environmental policies to improve availability and provision of healthy foods and beverages
- Increase opportunity for physical activity
- Increase parent engagement (in child care and school settings)
- Educational approaches
  - i.e. school nutrition curriculum
Dairy and Vegetables

① Increase low-fat/fat-free milk and yogurt while decreasing intake of cheese
   • Result: higher intake of magnesium, potassium, vitamin A, vitamin D while decreasing sodium and saturated fat

② Replacing soft drinks/sugar-sweetened beverages and sports drinks with nonfat milk
   • Result: reduce added sugars and empty calories, increase intake of calcium, vitamin D, and magnesium

③ Consume vegetables with minimal additions of salt and solid fat
   • Result: minimize intake of sodium and saturated fat
Part 4: What’s Next?
What’s Next?

 The comment period ends 5/8/15
 Wait for the 2015 DGA to be released
 The 5 year process starts again for the 2020 DGA
Recommendations for 0-24 months

Beginning in 2020, the Dietary Guidelines will address Americans of all ages, starting from birth.

- Current recommendations for this age group has been extrapolated from adult recommendations.
- Very few studies.
- May not be enough time to get good studies in the next few years.
- Interesting stuff!
Thank you!

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Questions?