

# Behind the Grain: Refining Perspectives on the Public Health Role of Enriched and Fortified Grain Foods

A foundational look at the science and policy  
that continues to shape modern grain nutrition.



# Disclosures

**Shelley Maniscalco, MPH, RDN (moderator):** Employed by Nutrition In Demand (NID) – clients include Alliance for Potato Research and Education, American Frozen Food Institute, American Heart Association, Bay State Milling, California Walnut Commission, FMI – The Food Industry Association, Grain Foods Foundation/Grain Foods Research Institute, Hass Avocado Board, ILSI North America, International Food Information Council, McCormick Science Institute, National Cattleman's Beef Association, National Dairy Council, Potatoes USA

**Michelle Kijek (session planner):** Employed by NID –clients include Alliance for Potato Research and Education, American Frozen Food Institute, American Heart Association, Bay State Milling, California Walnut Commission, FMI – The Food Industry Association, Grain Foods Foundation/Grain Foods Research Institute, Hass Avocado Board, ILSI North America, International Food Information Council, McCormick Science Institute, National Cattleman's Beef Association, National Dairy Council, Potatoes USA

**Erin Ball (funder):** Employed by Grain Foods Foundation and Grain Foods Research Institute

**Sharon Ruckdeschel (session planner):** Employed by Grain Foods Foundation and Grain Foods Research Institute

**Sasha Chamberlain, MS, RDN (session reviewer):** Subcontractor for NID. No relevant financial relationships to disclose.

# Disclosures: Heather Eicher Miller, PhD

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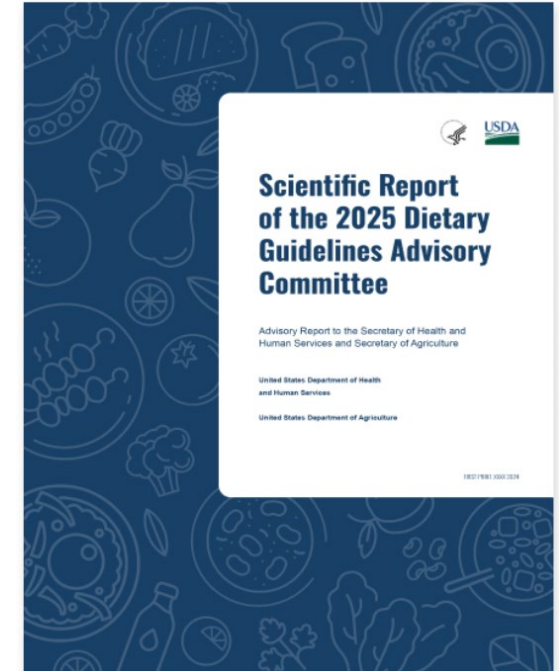
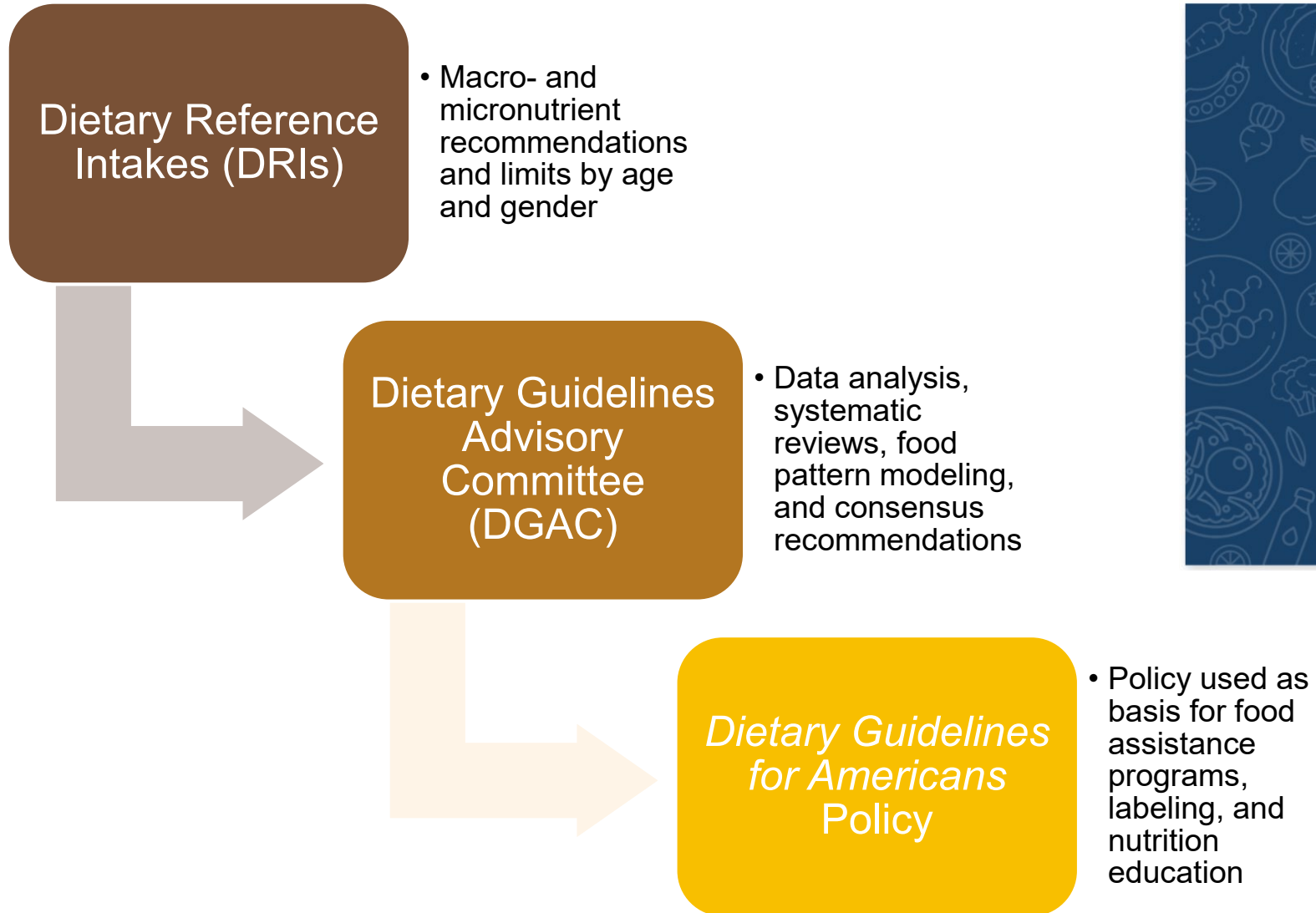
# Before We Begin: Questions and CPE

- Q&A
  - To ask a question, please use the Q & A feature in the Zoom meeting.
- Continuing Professional Education
  - Participation in today's **live webinar awards 1.25 CPEUs** in accordance with the Commission on Dietetic Registration's CPEU Prior Approval Program.
  - A certificate of completion will be emailed to attendees following the webinar.
  - **Recorded webinar:** Information about CPEU will be provided separately.

# Learning Objectives

1. Identify scientific rationale and public health benefits of enrichment and fortification of staple grain foods.
2. Understand changes in grain food guidance from the 2020-2025 to 2025-2030 editions of the *Dietary Guidelines for Americans*.
3. Identify public health risks of dietary guidance that advises against refined grain products.
4. Understand how enriched and fortified grain foods can be part of a healthy dietary pattern.

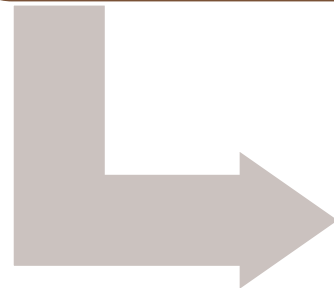
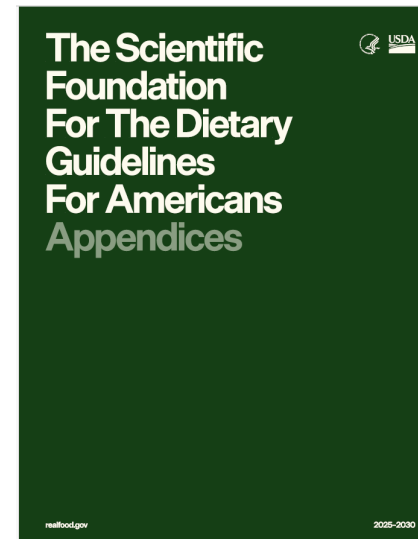
# Dietary Guidance Development: THEN



# Dietary Guidance Development: NOW

Scientific Foundation for the Dietary Guidelines for Americans: Appendices

- Nine scientists work independently to develop reviews on various topic areas



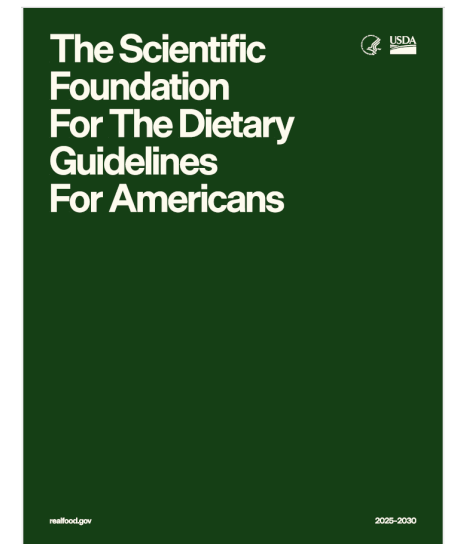
Scientific Foundation for the Dietary Guidelines for Americans

- Document to serve as basis for 2025-2030 DGA recommendations



*Dietary Guidelines for Americans Policy*

- Abbreviated policy to be used as basis for food assistance programs, labeling, and nutrition education



# The 2025-2030 DGA Will Be Used to Inform Federal Policy and Regulations (e.g., food assistance programs – WIC, SNAP, CACFP, Child Nutrition – and food labeling)



Nutrition Info		
Per serving 1 container		% Daily Value
Saturated Fat	18%	Med
Sodium	37%	High
Added Sugars	5%	Low

FDA.gov

USDA WIC Works Resource System  
U.S. DEPARTMENT OF AGRICULTURE



# New Dietary Guidelines' Hierarchy Focuses on Meat, Dairy, and Saturated Fat and Minimizes Importance of Grain Foods

## Messages

1. Eat the Right Amount for You
2. Prioritize Protein Foods at Every Meal
3. Consume (full-fat) Dairy
4. Eat Vegetables & Fruits Throughout the Day
5. Incorporate Healthy Fats (any fat found naturally in foods – including butter and beef tallow)
6. Focus on **Whole Grains**
7. Limit Highly Processed Foods, Added Sugars, & **Refined Carbohydrates**
8. Limit Alcoholic Beverages

Most



Least



# All Refined Grain Foods – Even Staples – Are Framed as Nutrient-Poor in DGA and on RealFood.gov

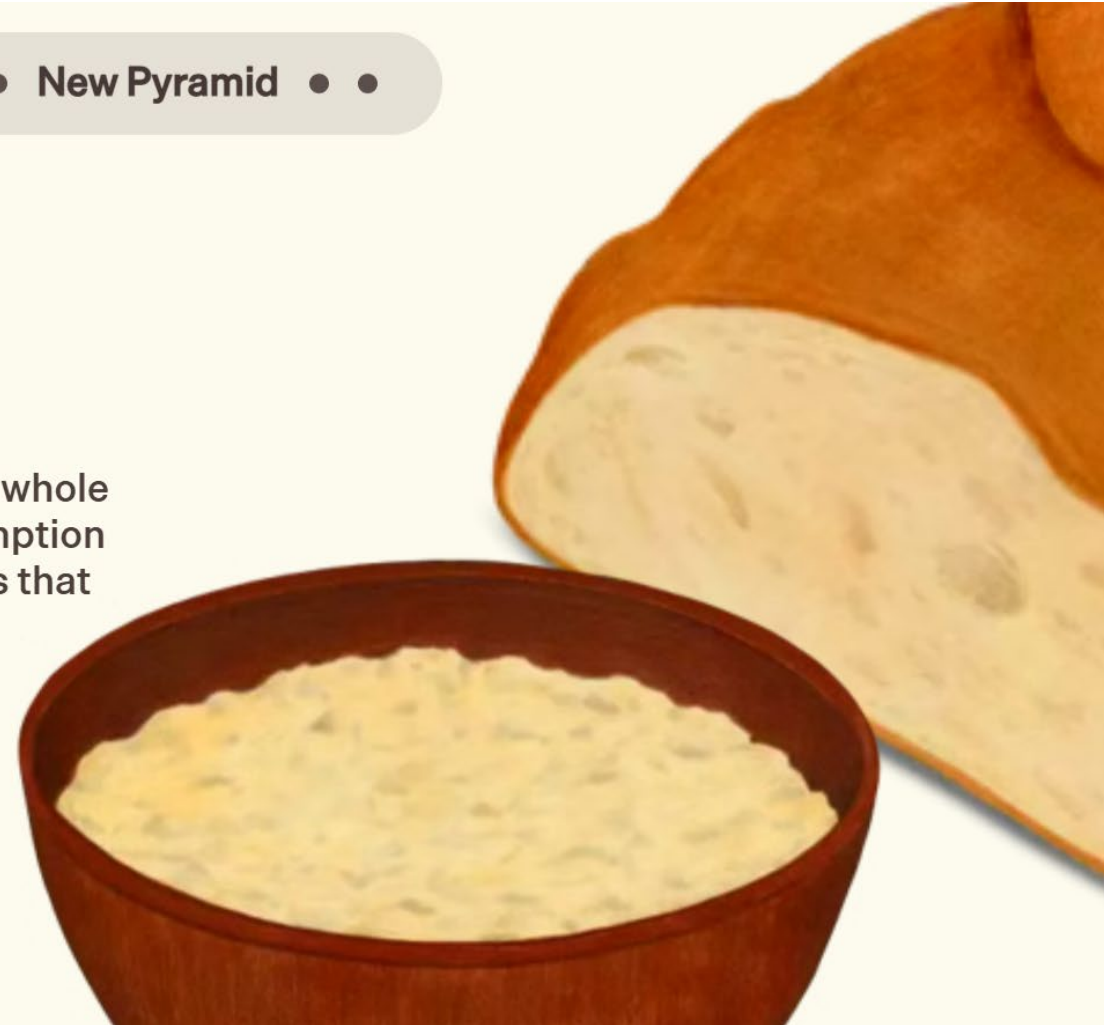
- + Significantly reduce the consumption of highly processed, refined carbohydrates, such as white bread, ready-to-eat or packaged breakfast options, flour tortillas, and crackers.

• • • New Pyramid • • •

## Whole Grains

Whole grains are encouraged. Refined carbohydrates are not. Prioritize fiber-rich whole grains and significantly reduce the consumption of highly processed, refined carbohydrates that displace real nourishment.

**Target:** 2-4 servings per day.



# For the First Time, Guidance Was Included to Recommend a Lower Carbohydrate Diet; Potential Nutrient Gaps in Vegetarian and Vegan Diets Continue to be Noted

## Individuals with Chronic Disease

- + Following the *Dietary Guidelines* can help prevent the onset or slow the rate of progression of chronic disease, especially cardiovascular disease, obesity, and type 2 diabetes. If you have a chronic disease, talk with your health care professional to see if you need to adapt the *Dietary Guidelines* to meet your specific needs.
- + Individuals with certain chronic diseases may experience improved health outcomes when following a lower carbohydrate diet. Work with your health care professional to identify and adopt a diet that is appropriate for you and your health condition.

## Vegetarians & Vegans

- + Consume a variety of whole foods, especially protein-rich foods, such as dairy, eggs, beans, peas, lentils, legumes, nuts, seeds, tofu, or tempeh.
- + Significantly limit highly processed vegan or vegetarian foods that can include added fats, sugars, and salt.
- + Pay careful attention to potential nutrient gaps when consuming a vegetarian or vegan diet. Vegetarian diets often fall short in vitamins D and E, choline, and iron, whereas vegan diets show broader shortfalls in vitamins A, D, E, B<sub>6</sub>, and B<sub>12</sub>; riboflavin; niacin; choline; calcium; iron; magnesium; phosphorus; potassium; zinc; and protein. Monitor nutrient status periodically, especially for iron, vitamin B<sub>12</sub>, vitamin D, calcium, and iodine.
- + To avoid nutrient gaps, prioritize targeted supplementation, diversify plant protein sources for amino acid balance, and enhance mineral bioavailability through food preparation techniques.

# The 2025-2030 DGA Protein Recommendations Have a Ripple Effect on Overall Dietary Patterns

- Protein RDA = 0.8 g/kg body weight
- New DGA protein recommendation = 1.2 – 1.6 g/kg body weight
- DRIs for macronutrients re-review was planned to begin in 2026, but indefinitely postponed currently
  - Acceptable Macronutrient Distribution Range (AMDR) intended to be replaced with Chronic Disease Risk Reduction (CDRR) values in that update
- No evidence to show that food pattern modeling was done to ensure nutrient adequacy of the newly created and recommended pattern

# New Dietary Patterns Include More Meat/Protein Foods, Slightly More Vegetables, Less Grains (and No Refined Grains)

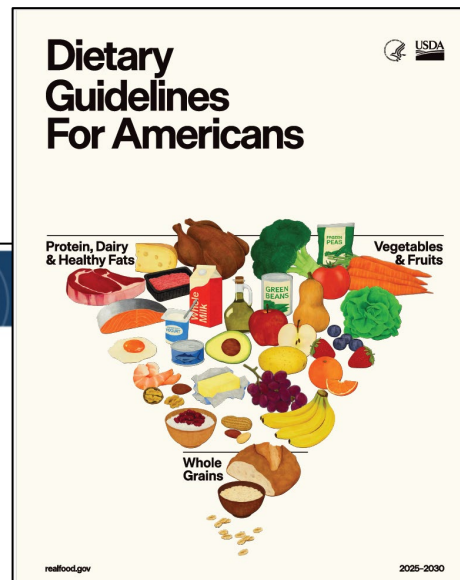
Daily Servings by Calorie Level

Food Group	Calorie Level of Pattern	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200
	<b>Serving Size Examples</b>	<b>Daily Servings</b>											
<b>Protein Foods</b>	3 oz cooked meat, poultry, or seafood; 1 egg; ½ cup beans, peas, or lentils; 1 oz nuts or seeds; 2 tbsp nut or seed butter; 3 oz soy	1–1 ½	1 ½–2	2–2 ½	2 ½–3 ½	2 ½–3 ½	3–4	3 ½–4 ½	3 ½–4 ½	3 ½–4 ½	4–5	4–5	4–5
<b>Dairy</b>	1 cup milk; ¾ cup yogurt; 1 oz cheese	2	2 ½	2 ½	3	3	3	3	3	3	3	3	3
<b>Vegetables</b>	1 cup raw or cooked; 2 cups leafy greens	1 ¼	1 ¾	1 ¾	2 ½	3	3	3 ½	3 ½	4 ¼	4 ¼	4 ¾	4 ¾
<b>Fruits</b>	1 cup raw; ½ cup dried	1	1	1 ¼	1 ¼	1 ¼	2	2	2	2	2 ½	2 ½	2 ½
<b>Whole Grains</b>	½ cup cooked oats, brown rice, barley, quinoa, or buckwheat; 1 slice bread; 1 tortilla	1–2	1 ½–2 ¾	1 ¾–3 ¼	1 ¾–3 ¼	2–4	2–4	2 ¼–4 ½	2 ¾–5 ¼	3–6	3 ¼–6 ½	3 ¼–6 ½	3 ¼–6 ½
<b>Healthy Fats</b>	1 tsp olive oil or butter	2 ½	2 ½	2 ½	3 ½	4	4 ½	4 ½	5	5 ½	6	7	8

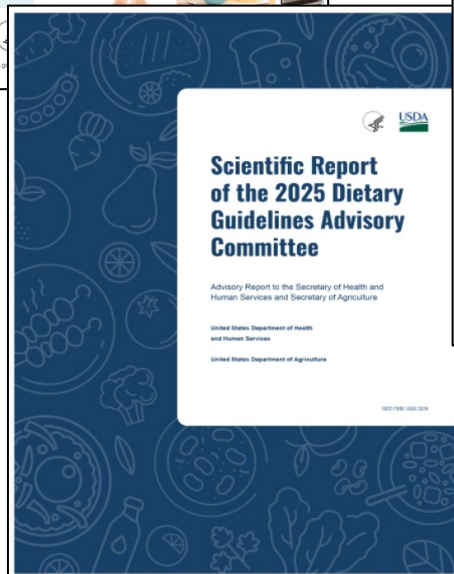
# Amount of Grains for a 2,000 Calorie Dietary Pattern Are Lower in 2025-2030 DGA Compared to 2020-2025 Healthy U.S.-Style Dietary Pattern and 2025 DGAC



6 oz eq/d  
3 oz eq Whole Grains  
3 oz eq Refined Grains



2-4 servings (oz eq)/d  
All Whole Grains



6 oz eq/d  
≥ 3 oz eq Whole Grains  
< 3 oz eq Refined Grains

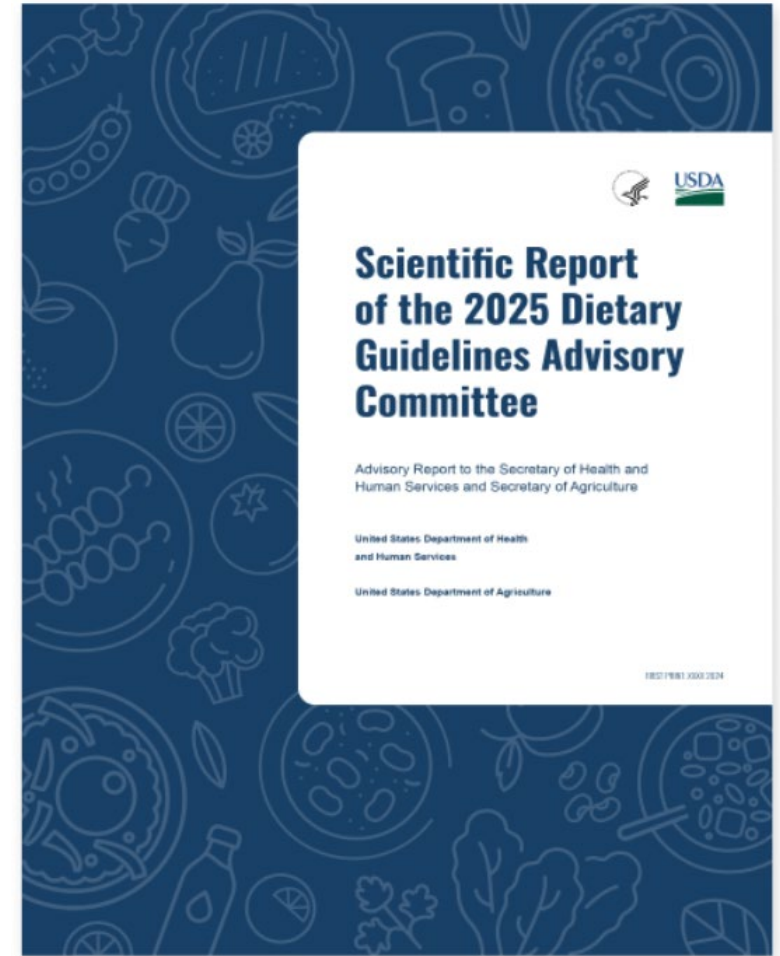
## Other Differences

- Servings vs. ounce/cup eq
- Fruit amounts same
- Dairy slightly changed
- Total Vegetables slightly higher
- Protein foods increased
- No food subgroups
- “Healthy Fats” vs. oil amounts

# Grain Foods, Including Refined Grain Foods, Contribute Key Nutrients

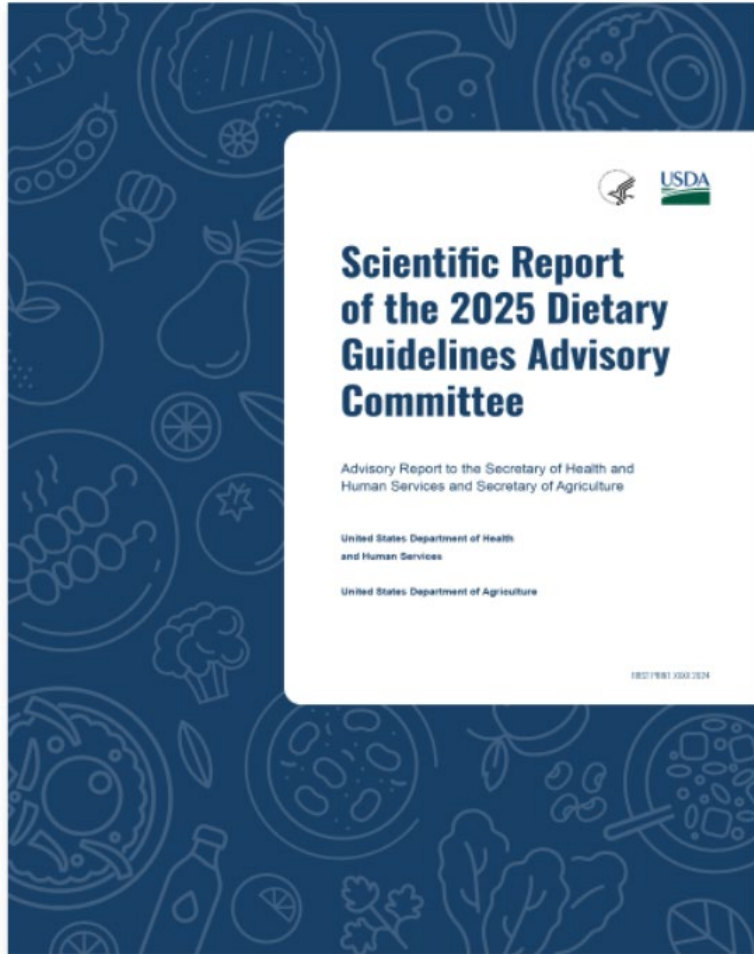
## 2025 DGAC Data Analysis

- The Grains food group (assuming 50% whole/50% refined, enriched):
  - **All macronutrients** (carbohydrate, dietary fiber, protein, and dietary fats)
  - **Vitamins** (folate, thiamin, niacin, riboflavin, vitamin B6)
  - **Minerals** (iron, magnesium, zinc, copper, phosphorous, calcium)
- The Grains Food Group contributes **~50-60 percent of the total folate and total iron**, **~40-50 percent of the total carbohydrate, total fiber**, and total thiamin, and **~30-40 percent of the total niacin, total copper, total magnesium, and total zinc** starting at age 12 months for most calorie levels.



# Grain Foods, Including Refined Grain Foods, Contribute Key Nutrients

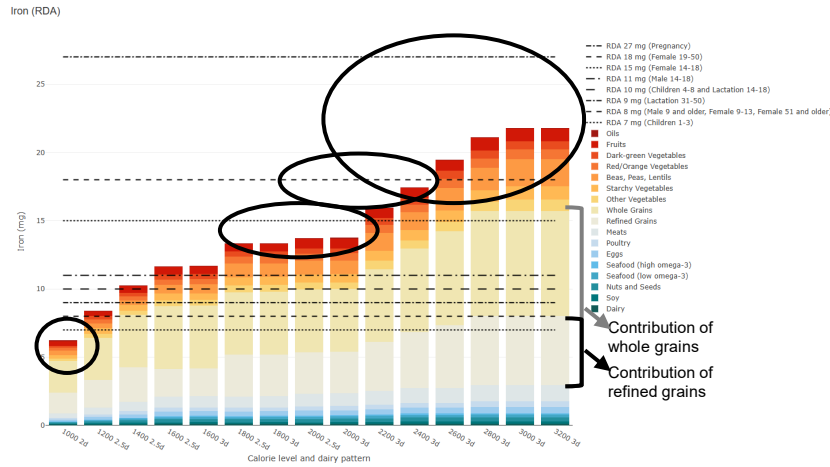
## 2025 DGAC Food Pattern Modeling



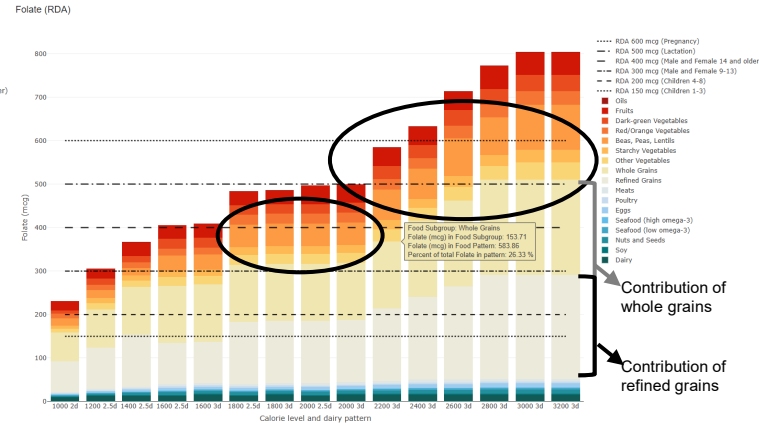
- “Several nutrient gaps are introduced when carbohydrate-containing nutrient dense foods and beverages are removed from the HUSS Dietary Pattern, including **vitamin A, thiamin, riboflavin, niacin, folate, calcium, copper, iron, magnesium, phosphorous, zinc, choline, potassium, and fiber**. Additional nutrients fall below recommendations for pregnancy and lactation, including vitamin C, vitamin B6, and vitamin B12. These results indicate the important nutrients provided by carbohydrate-containing foods and beverages and the gaps needed to be addressed if these foods are removed.”
- “In incremental reduction analyses for Refined Grains (not including complete removal), nutrients that fell below goals in at least 1 age, sex, or life stage group include carbohydrates (for children ages 2 through 8 years), **folate (females ages 51 years and older; lactating groups ages 31 years and older)**, and **iron (females ages 14 through 18 years)**.”
- Removal of Refined Grains results in nutrient gaps for vitamin A, D, E, folate, choline, iron, magnesium, fiber for various age/sex groups. Reductions of whole grains of 1 oz or less can mean nutrient gaps in vitamin A, choline, iron, potassium, magnesium, zinc, fiber for various age/sex groups.

# Removal of Refined Grains Means Major Gaps in Essential Nutrients for Growth, Pregnancy, and Lactation

Contribution of each food group and sub-group to Iron and Folate Recommendations for each age/sex/life-stage appropriate kcal level



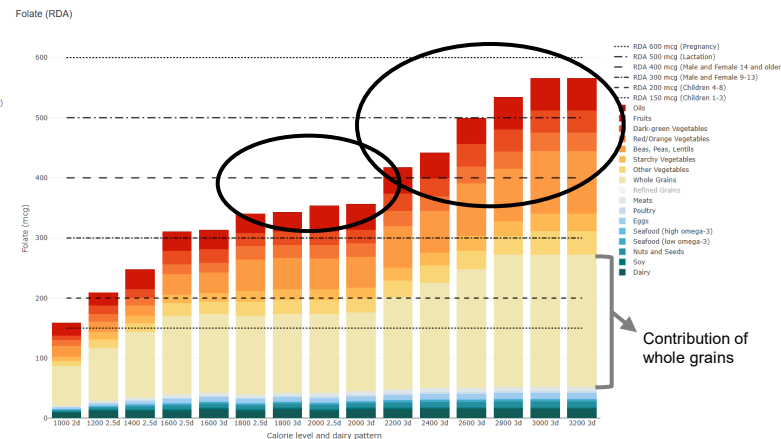
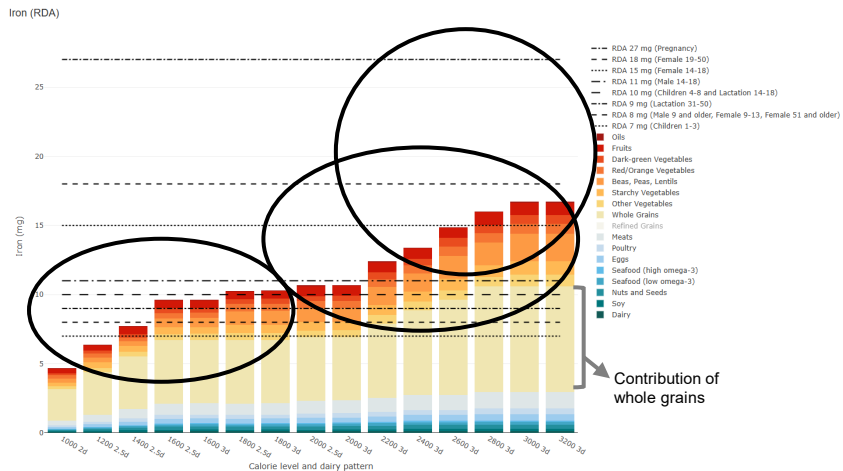
Iron



Folate



Removing refined grains means almost all age/sex groups will not meet iron recommendations



Removing refined grains means teen and adult women, and individuals who are pregnant and lactating will not meet folate recommendations

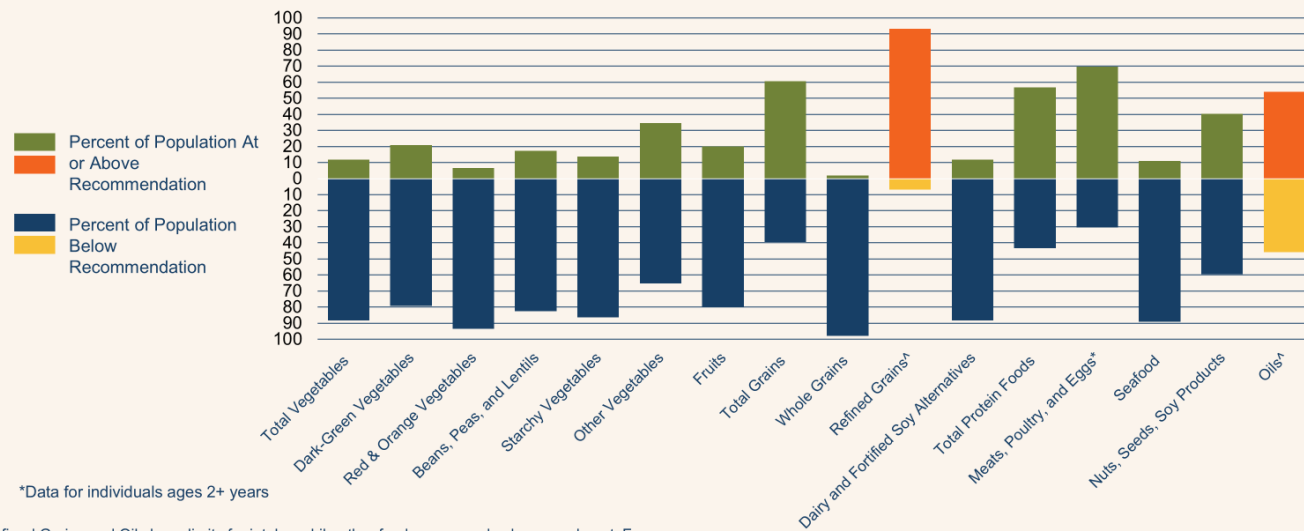


# Contribution of Enriched and Fortified Grain Foods in Healthy Dietary Patterns



# The New Scientific Foundation Report does not Acknowledge the Reality of Current US Dietary Intake to Inform the DGA Goals and Make them Attainable

## Percentage Below or At/Above Food Group and Subgroup Recommendations (Ages 1 Year and Older)



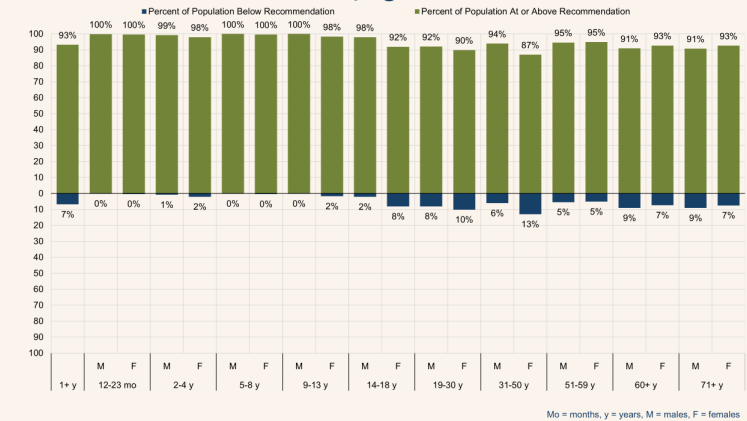
<sup>\*</sup>Data for individuals ages 2+ years

<sup>^</sup>Refined Grains and Oils have limits for intake, while other food groups and subgroups do not. For example, Refined Grains should be no more than half of total Grains intake. Thus, intakes for Refined Grains and Oils are described using different colors (orange and yellow)

Note: The 2020-2025 Healthy U.S. Style-Dietary Patterns are used for this comparison. The Dietary Patterns also include a limit on calories for other uses, which is not included on this slide

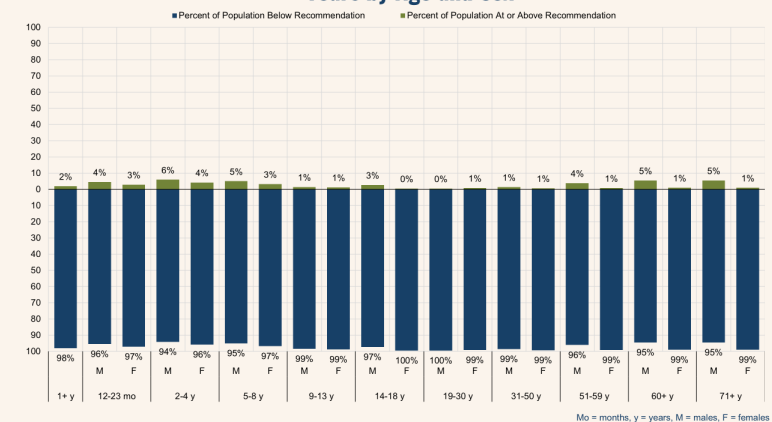
Source: *Dietary Intakes: What We Eat in America, NHANES 2011-2018, 2 days dietary intake data, weighted. Recommended Intake Ranges: Healthy U.S.-Style Dietary Pattern, Dietary Guidelines for Americans, 2020-2025.*

## Refined Grains: Percentage Below or At/Above Recommendations in Individuals Ages 1+ Years by Age and Sex



Data Source: *Dietary Intakes: What We Eat in America, NHANES 2011-2018, by age and sex, 2 days dietary intake data, weighted. Recommended Intake Ranges: Healthy U.S.-Style Dietary Pattern, Dietary Guidelines for Americans, 2020-2025.*

## Whole Grains: Percentage Below or At/Above Recommendations in Individuals Ages 1+ Years by Age and Sex



Data Source: *Dietary Intakes: What We Eat in America, NHANES 2011-2018, by age and sex, 2 days dietary intake data, weighted. Recommended Intake Ranges: Healthy U.S.-Style Dietary Pattern, Dietary Guidelines for Americans, 2020-2025.*



# The Majority of Grain Foods Consumed are Staple Grain Foods

Grain foods account for ~15% of kcals

- ~80% of total grain intake comes from more nutrient-dense forms

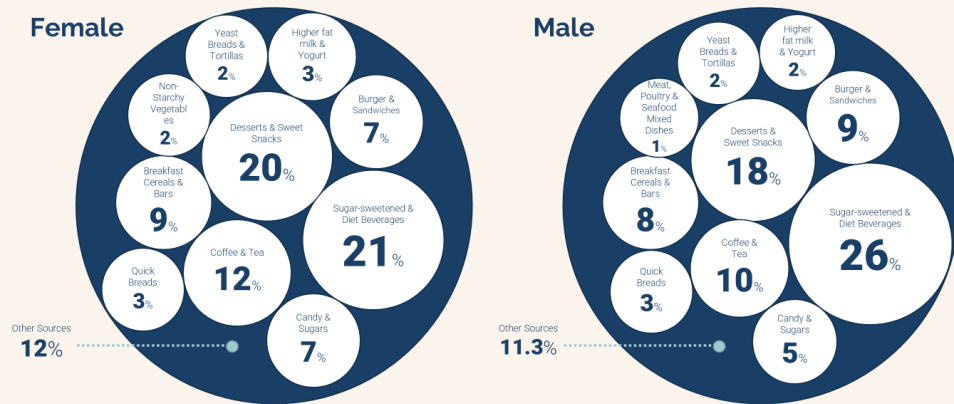
The majority of grain intake (~85%) is refined, enriched and/or fortified and ~15% whole grain foods

- 40% of fiber intake from enriched grain foods
- Only ~23% of refined grain intake is from less nutrient-dense options

1/3 or more of consumers say they have had sandwich bread (62%), cold cereal (55%), white pasta (53%), crackers (51%), rice (48%), buns/rolls (37%), tortillas/flatbreads/pitas/naan (36%), egg noodles (35%), and hot cereal (33%) in the past month

# Grain Food Intake is Not Linked to Chronic Disease Outcomes

Top 10 Food Category Sources of Added Sugars in Individuals Ages 2+ Years



Data Source: Dietary Intakes: What We Eat in America, NHANES 2011-March 2020 pre-pandemic, ages 2 years and older, day 1 dietary intake data, weighted. Food Subcategories: DGAC subcategories adapted from WWEIA Food Categories.

63

Grain food category of “Yeast breads & tortillas” was not a top source of added sugars

Some studies confound refined grain intake with diet-related chronic disease by grouping them with other foods in a “Western dietary pattern”

Eleven meta-analyses of 24 cohort studies showed no significant association between refined grain intake and risks of all-cause mortality, CVD, T2D, CHD, stroke, hypertension, or cancer

Total grain intake associated with lower risk of all-cause mortality and not linked to CVD, CHD, stroke, or cancer

- Consuming up to 6-7 servings of refined grains/day (1 serving = 30g) not linked to adverse health outcomes

# Healthy Grain Foods Offer Benefits

- **Healthy grain foods identified:** Two models (Quality Carbohydrate Food Score and Nutrient Rich Foods Index) used nutrition criteria (e.g., high fiber, whole grains, and other nutrients, while limiting added sugars and sodium)
- **Better metabolic health:** Consumption of healthy grains associated with lower obesity prevalence and significantly lower fasting plasma insulin levels
- **Improved diet quality:** Consumers of healthy grains had higher HEI scores and consumed more fruits compared to lower healthy grain consumers
- **Broader implications:** Findings suggest that both whole and refined grains can contribute to health, contrary to public health dogma and low-carb diet enthusiasm

# Enriched and/or Fortified Grains are Top Sources of Underconsumed Food Groups and Nutrients

Top food category sources of vegetables:

- Burgers, sandwiches, tacos, burritos, rice, pasta, and other grain based mixed dishes

Top food category sources of fiber and folate:

- Burgers, sandwiches, rice, pasta, grain-based mixed dishes, and breakfast cereals



# Staple Refined Grain Foods are Foundational to Traditional Cultural Foodways

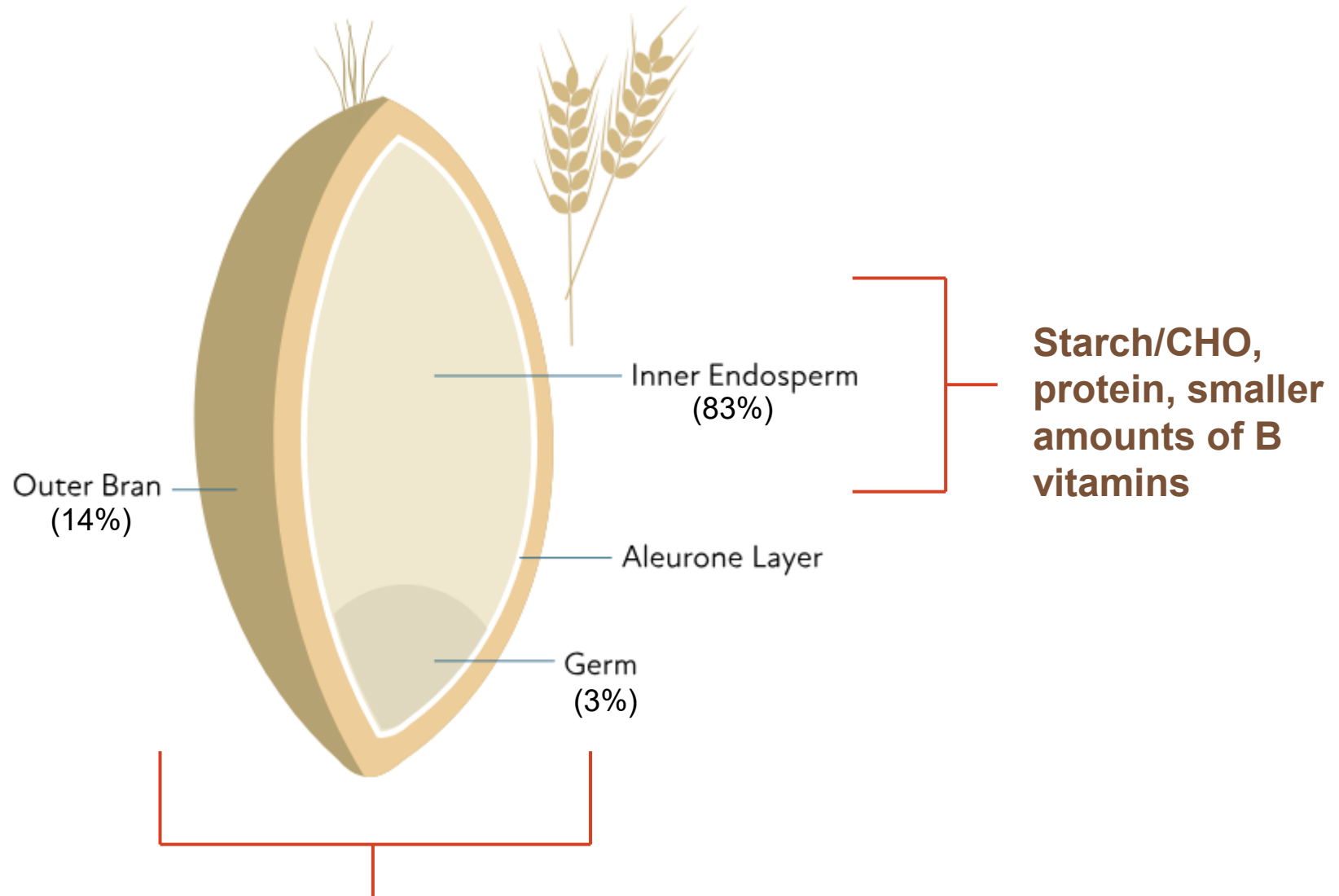


- Grain foods are foundational to cultural foodways
- Many of the traditional choices, and those still consumed prevalently today are refined
  - Various varieties of white rice (e.g., long-, medium-, or short grain, arborio, jasmine, basmati, etc.)
  - Noodles
  - Flour tortillas
  - Pasta



# The History of Enriched and Fortified Grain Foods

# Grounding: Inside the Grain



**B vitamins, fiber, trace minerals, unsaturated fats, antioxidants, phytonutrients**



## **Two Sides of the Same Kernel**

**Whole Grains** – Bran, germ, and endosperm

**Refined Grains** – Endosperm



## Refined Grains – Ideal for Enrichment and Fortification

**Consumption:** Widely consumed throughout the year, by a large proportion of the at-risk population

**Stability and Sensory Properties:** Sensory qualities were not altered by the addition of nutrients

**Production:** Food industry was highly involved and a cooperative partner throughout the process

**Cost:** Food industry ensured costs were not prohibitively transferred to consumers in the marketplace

# Understanding Enrichment and Fortification

**Enrichment:** Replenishing nutrients naturally found in the food that were lost or reduced during processing – often in amounts greater than that originally found in the food

**Fortification:** The addition of nutrients not naturally found in a food in order to meet a specific health need



# The Road to Enrichment and Fortification in the US

**Early 1900s:**  
Pellagra  
prevalent

**Late 1930s:**  
Bakers  
voluntarily  
add  
vitamins

**1939:** AMA  
Council of  
Foods and  
Nutrition  
encourage  
enrichment

**1940:** FDA  
adopts term  
“enriched”

**1941:** FNB  
encourages  
enrichment  
of flour and  
bread

**1942:** US  
Enrichment  
Act  
mandates  
adding B vit  
and iron to  
enriched  
grain  
products

**1998:** FDA  
requires  
folic acid to  
be added to  
enriched  
grain  
products

# B Vitamin Deficiencies Were Rampant Before Enrichment

## Issue

- High rates of B vitamin deficiency diseases in the early 1900s – pellagra (niacin deficiency), beriberi (thiamin deficiency), and riboflavin deficiency disease
- Deaths from pellagra far outnumbered those due to other nutritional deficiencies
- At its height in 1928-1929, pellagra was the 8<sup>th</sup> or 9<sup>th</sup> cause of death (excluding accidents) in many southern states

## Impact

- Pellagra-attributed mortality declined significantly in the 1940s and 1950s compared to peak levels in the late 1920s
- Pellagra was virtually eradicated by 1960; beriberi and riboflavin deficiency disease now extremely rare
- Enrichment of refined grains with B vitamins served to effectively eliminate pellagra, beriberi, and riboflavin deficiency disease

# Folic Acid Fortification has Significantly Addressed NTDs – A Major Public Health Concern

## Issue

- Neural tube defect (NTD) prevalence, as well as new knowledge that folate supplementation could prevent these debilitating birth defects
- Lack of adherence to supplementation recommendations, especially pre-pregnancy
- Folic acid more absorbable than folate naturally found in foods

## Impact

- Decreases of 19-32% in NTD prevalence (since fortification started in 1998)
- Approximately 1,326 births (annually) that would have been affected by NTDs
- Approximately \$508 million in annual savings (total direct costs)
- Prevalence of low serum and red blood cell (RBC) folate decreased from 24% and 3.5% respectively to  $\leq 1\%$  following fortification (1999-2010)

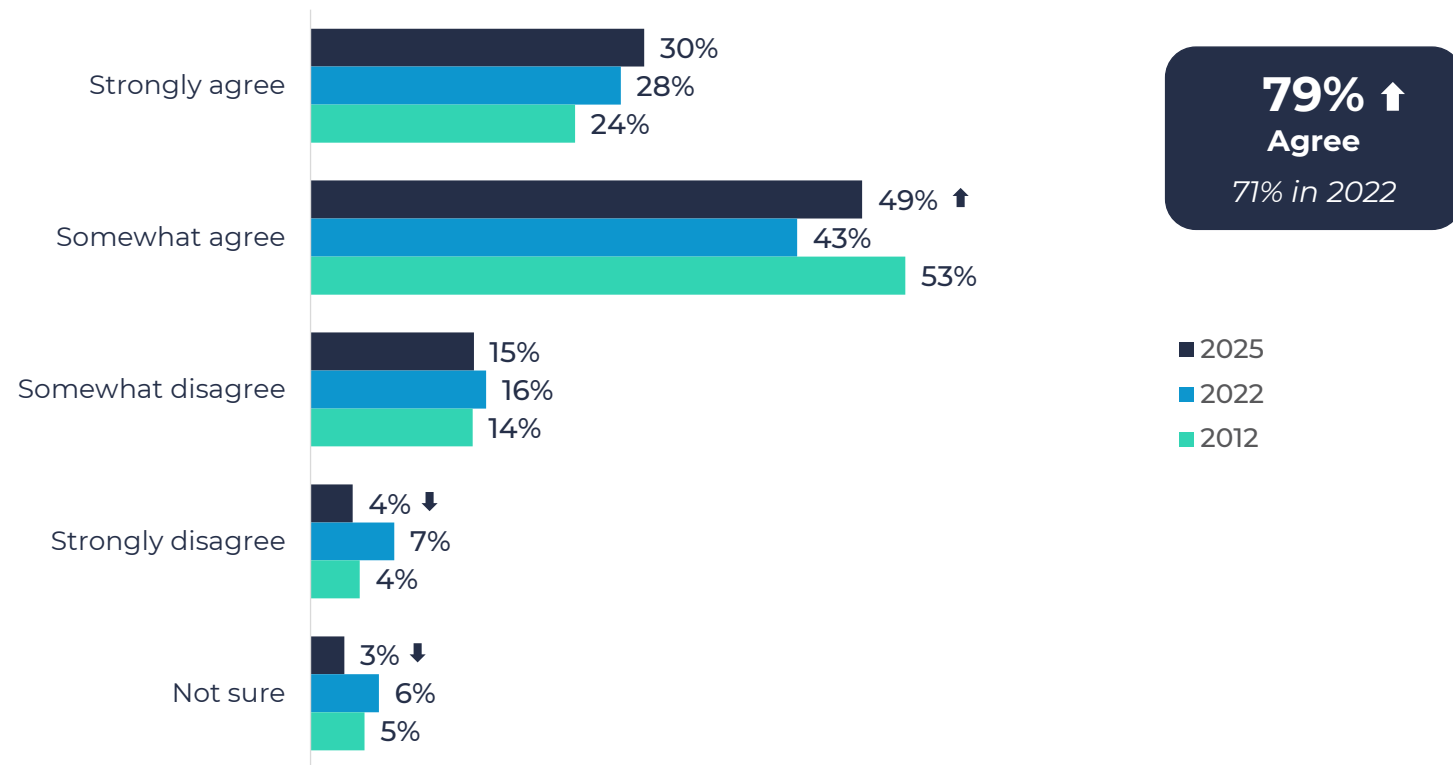


# Impact to Consumer Knowledge and Perceptions

# Eight in ten Americans agree that it is hard to know what to believe about nutrition information because it seems to keep changing.

Overall agreement has risen from 71% in 2022, and the share who strongly agree has climbed to 30%, up from 24% in 2012. Meanwhile, fewer Americans strongly disagree (4%, down from 7% in 2022) and are unsure (3%, down from 6% in 2022 and 5% in 2012).

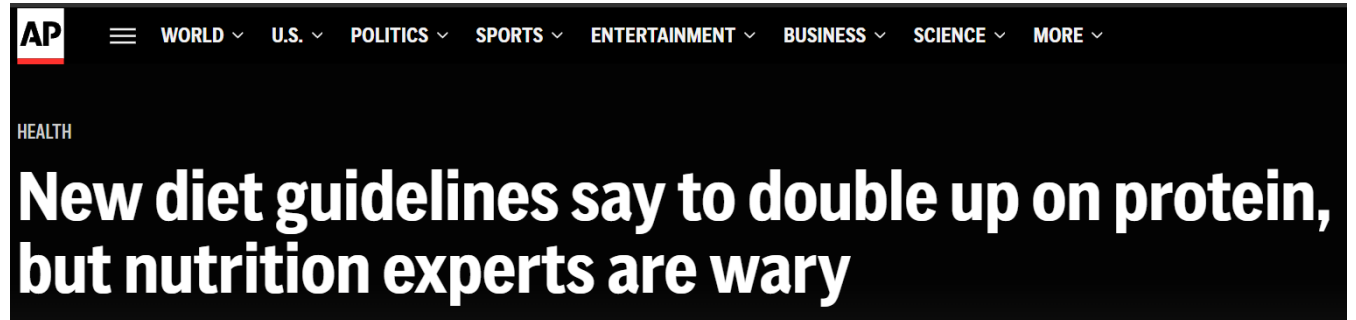
***“Because nutrition information seems to keep changing, it’s hard to know what to believe”***



# Mixed Messages and Recommendation Reversals Can Result in Consumer Confusion

## How are the new dietary guidelines different from previous recommendations?

**Nestle:** They're totally radical. They've thrown out 40 years of dietary guidelines just like that, and substituted recommendations that date back to the 1950s. My slogan for it is: They're muddled, they're inconsistent, they're contradictory, they're ideological, and they're very retro. There's one really great thing about them. They say, "Eat real food." It sounds ridiculous that that would be revolutionary, but it is, and it's very good. But the eat real food is not the major message of the guidelines.



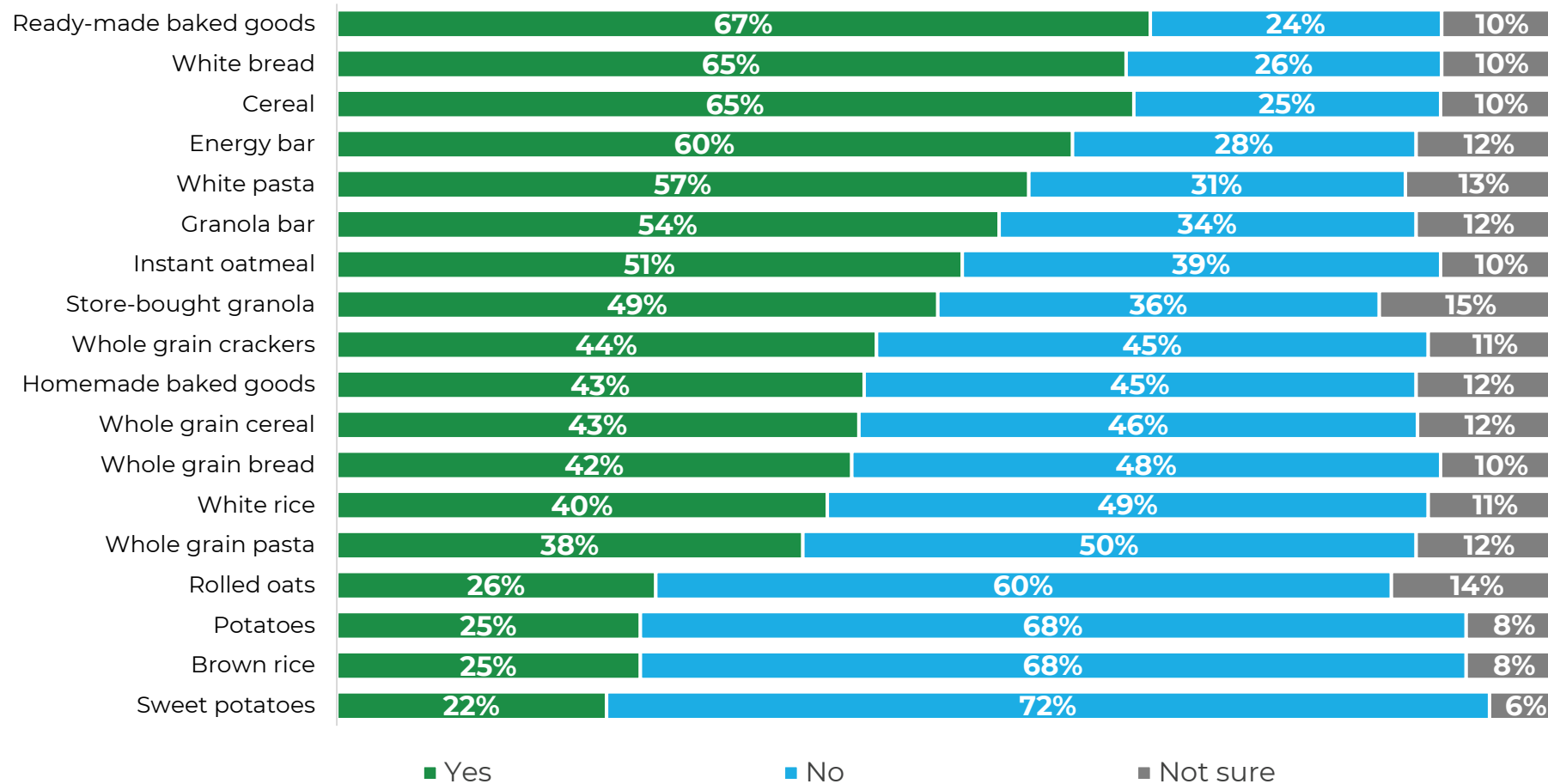
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## New Dietary Guidelines Urge People to Eat More Protein and Fewer Processed Foods

# Consumers Prioritize Protein and Have Concerns with Carbohydrates

- The top reasons that consumers purchase grain-based foods are that they pair well with other foods (e.g., protein, vegetables) and that they are a good value (i.e., cost, nutrition)
- Nutrients most sought when consuming grain-based foods: protein and fiber
- Consumers already value and associate protein with being healthy
  - A high-protein diet is the number one eating pattern followed in the U.S. - significantly increased from 2024
  - Protein is the top nutrient consumers report they are trying to consume
  - "Good source of protein" is the criteria they use most to define a healthy food
- Calories from carbohydrates and sugar are consistently believed to cause weight gain

# 8 in 10 Consumers Consider Whether a Food is Processed Prior to Purchasing; They Identify Several Key Grain-Based Staple Foods as Processed



**Those under age 45** are more likely to consider potatoes and sweet potatoes as processed.

**Q7.** Please review the list of carbohydrate foods below. Using your best judgment, select yes, no or not sure for each of the categories listed below.

**Source: 2024 IFIC Consumer Research: Public Perceptions of Processed Foods**

I would consider this a processed food.

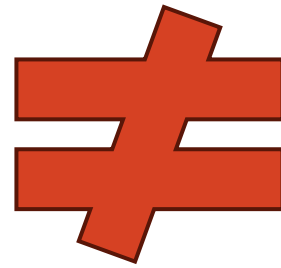


**Could New Guidance About  
Packaged Foods, Food  
Processing, and Refined Grains  
Cause Unintended  
Consequences?**

# Separating Grain Food Staples from Sweet Indulgences Under the Grain Umbrella Could Facilitate Consumer Decision Making



**Staples**



**Indulgences**

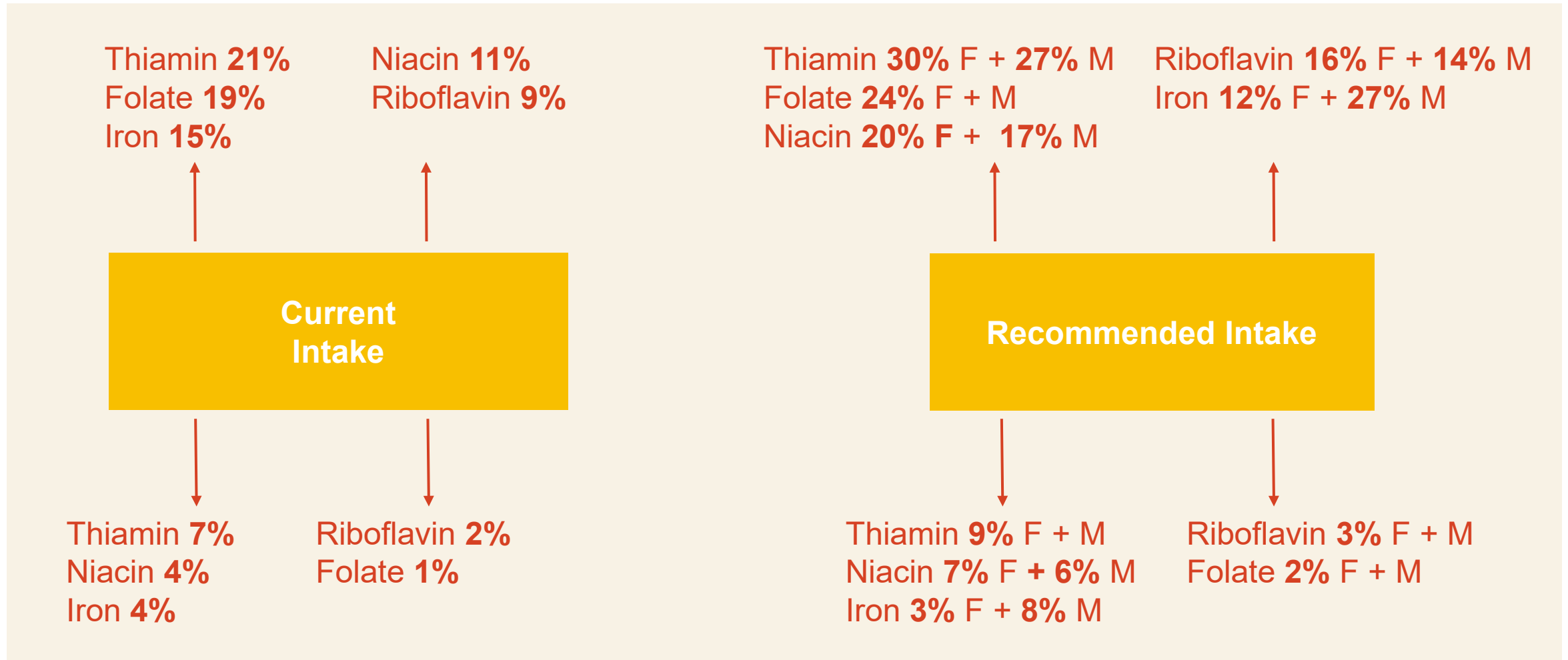
# Enriched, Fortified Bread Aisle Staples Comprise a Substantial Amount of Refined Grains Eaten and Contribute Important Nutrients

- Bagels
- Bread
- English muffins
- Rolls
- Tortillas
- Pitas



# Bread Aisle Enrichment and Nutrient Adequacy

## WITH ENRICHED FLOUR IN BREAD AISLE PRODUCTS



## WITHOUT ENRICHED FLOUR IN BREAD AISLE PRODUCTS

# Eating Behavior is Notoriously Difficult to Change



# Behavioral Science and Translational Research

## 2025 DGAC research recommendation:

**“To address this persistent gap between dietary recommendations and actual intakes, diverse expertise in behavioral, implementation, and communication sciences is needed to evaluate the science of dietary behavior change, make evidence-based recommendations for strategies to promote dietary intakes that align with Dietary Guidelines recommendations, and provide evidence for effective implementation strategies in multiple contexts (e.g., home, daycare, school, workplace) where federal nutrition programs may be provided. In this context, the Committee made recommendations around behavioral science, communication, and implementation.”**

- Determine evidence-based behavioral and implementation strategies associated with successful adoption of evidence-based recommendations across different life stages, populations, and settings.
- Identify evidence-based policy, systems, and environmental change strategies for implementing the Dietary Guidelines for Americans across different life stages, populations, and settings.
- Identify evidence-based health communication strategies for conveying and promoting the Dietary Guidelines for Americans across different life stages, populations, and settings.
- Select members with expertise in behavioral, communication, policy, and implementation sciences for the next Committee.

# Final Grains of Thought...

- Both **enriched/fortified refined grain** and **whole grain foods** serve important roles in achieving and maintaining good public health
- Diet quality has not appreciably improved over time – we must **help consumers to meet nutrient recommendations and build healthy dietary patterns in ways that are enjoyable and realistic** for them
- It's possible that we may need to talk differently than we have in the past about types of grain foods and how to consume them – for instance **using terms like “staple” and “indulgent” grain foods vs. whole and refined**
- **Sensational, extreme messaging could have detrimental unintended health consequences** long-term for our society
- It's important for healthy eating to be positive and enjoyable!





# LEARNER ASSESSMENT



# HOW HAS GRAIN FOOD GUIDANCE CHANGED FROM THE 2020-2025 TO 2025-2030 EDITIONS OF THE DIETARY GUIDELINES FOR AMERICANS?

- A. Visual hierarchy of New Food Pyramid minimizes importance of grain foods
- B. Staple grain foods, such as flour tortillas and white rice, framed as nutrient poor
- C. Lower carbohydrate diet recommended for individuals with certain chronic diseases
- D. All of the above

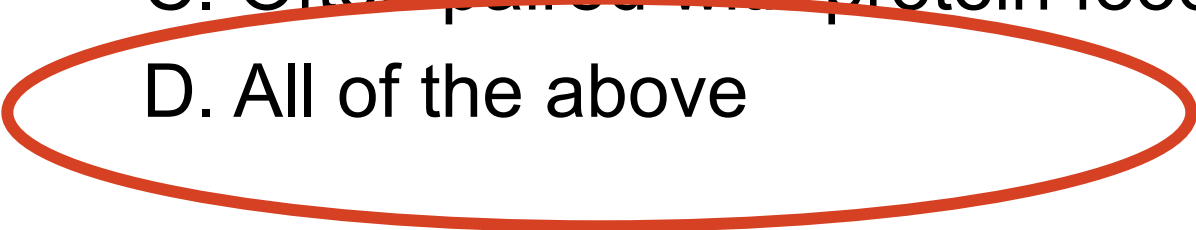
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# HOW DO GRAIN PRODUCTS (REFINED, ENRICHED, FORTIFIED, AND WHOLE) SUPPORT HEALTHY DIETARY PATTERNS?

- A. Source of fiber
- B. Serve as staple foods for many cultural foodways
- C. Often paired with protein foods and vegetables
- D. All of the above

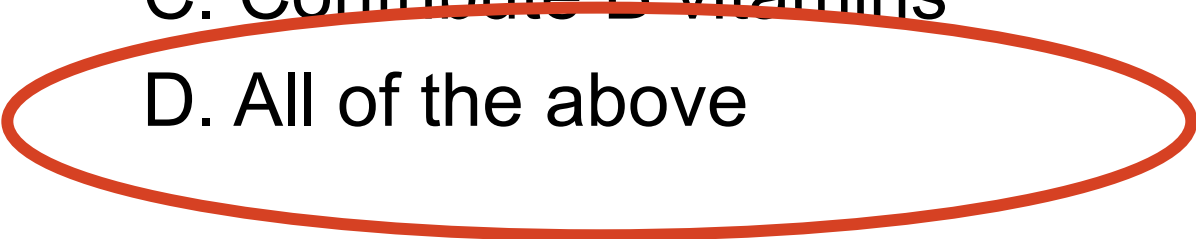
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# WHAT IS ONE PUBLIC HEALTH BENEFIT OF REFINED GRAIN PRODUCTS?

- A. Contribute folate
- B. Contribute iron
- C. Contribute B vitamins
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# WHAT CAN DIETITIANS AND OTHER NUTRITION EXPERTS DO TO SUPPORT HEALTHY DIETARY PATTERNS?

- A. Amplify evidence-based nutrition messaging that celebrates staple grain foods in traditional cultural foodways
- B. Recommend all people follow low carbohydrate diets
- C. Shame people for eating “indulgent” grain foods
- D. Advise only consuming grain foods at breakfast

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**THANK YOU – NOW LIVE  
Q&A!**



# Navigating The Carb Cautious Era: Insights, Evidence & Practical Guidance

**Feb 26 @ 2PM ET**



Monica Amburn, MS, RDN, LDN  
VP, Food Safety & Nutrition, IFIC



Maya Feller, MS, RDN, CDN  
Founder, Maya Feller Nutrition

**Free webinar. This activity is pending CDR review and approval for 1 CPEU.**