

Comparative Analysis of Chinese and American Dietary Guidelines

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Abstract. Dietary guidelines are authoritative reference documents developed based on the national health status, nutritional science research, and dietary cultures of various countries, playing a pivotal role in guiding residents toward balanced diets, preventing chronic diseases, and enhancing public health literacy. This paper conducts a comprehensive comparison between the *China Dietary Guidelines for the Population (2022) * and the *Dietary Guidelines for Americans (2025-2030) * across five dimensions: development background, core principles, specific recommendations, practical implementation, and adaptation for special populations. The comparison reveals significant differences between the two guidelines in terms of dietary patterns, quantitative standards, behavioral guidance, and implementation approaches: the Chinese guidelines emphasize cultural adaptability, comprehensive coverage of special populations, and clarity of quantitative indicators; whereas the U.S. guidelines focus on systematic interventions in food environments and personalized self-management. These differences are closely related to factors such as dietary cultural traditions, the spectrum of national health conditions, the food industry system, and policy orientations. Drawing on international evidence-based practices and considering China's dietary culture and health challenges, this study aims to refine localized guidelines and provide scientific foundations and policy references for healthy nutrition practices in China.

Keywords: Dietary guidelines; China; United States; cross-cultural comparison; nutritional recommendations.

1. Introduction

"Food is the paramount necessity of the people," as Sima Qian emphasized in the *Records of the Grand Historian: Biography of Li Sheng and Lu Jia*, highlighting the critical importance of diet to human survival [1]. A scientifically balanced diet helps ensure nutritional adequacy and reduce the risk of chronic diseases, and dietary guidelines serve as a key tool for translating dietary wisdom into practice. Dietary guidelines originated in Sweden in the 1960s, when the country issued the world's first official food selection guidance document to address issues of overnutrition and chronic diseases; these guidelines were later adopted as core health management frameworks tailored to each nation's specific context [2]. China and the United States face distinct nutritional health challenges: China bears a dual burden of both malnutrition and overnutrition [4], with monitoring data from 2020 showing that 34.3% of residents aged 18 and above were overweight [3]; the United States, on the other hand, struggles with high obesity rates and a high prevalence of chronic diseases, with over 70% of adults experiencing overweight or obesity [5]. These differences are directly reflected in their respective latest dietary guidelines: the *Dietary Guidelines for Chinese Residents (2022)* focuses on "preventing chronic diseases and ensuring food security," balancing nutrition with cultural heritage to establish a comprehensive life-cycle guidance system [6]; while the *Dietary Guidelines for Americans, 2025–2030* addresses reliance on highly processed foods through a "crisis intervention" approach, emphasizing improvements in the food environment and weight management [7]. This paper compares the core differences and underlying logic of these two guidelines to provide reference insights for localized improvements and cross-cultural healthy dietary practices [8].

2. Comparison between Dietary Patterns and Core Recommendations

2.1. Differences in the Development of Dietary Patterns Between China and the United States

The China Guidelines adopt the "Balanced Diet Pyramid (2022)" as the core visual framework to establish an Eastern healthy dietary model characterized by "grains as the main component and food diversity," with its key features derived from the traditional dietary patterns of China's southeastern coastal regions [3]. The core advantages of this model have been substantiated by evidence-based research: individuals adhering to this model exhibit a 15%-20% lower incidence of hypertension and stroke-related mortality compared to the national average, along with an extended life expectancy by 3–5 years. Its defining characteristics include "adequate intake of vegetables and fruits, prioritization of fish and shrimp, a light and low-sodium diet, and dominance of grains and tubers."

In stark contrast, the U.S. guidelines center on the "nutrient-dense dietary pattern," employing an inverted pyramid visualization to emphasize the principle of prioritizing natural foods and avoiding processed foods [5]. The core rationale is to maximize nutrient intake while minimizing harmful components under total energy control; significant differences exist between the two countries regarding specific recommended amounts for each food category.

Table 1. Comparison of Core Recommendations in Dietary Guidelines for Chinese and American Residents

Food Category	China Dietary Guidelines for Residents (2022 Edition)	U.S. Dietary Guidelines (2025–2030 Edition)
Cereal Grains/Whole Grains	Daily intake: 200–300 g; whole grains and legumes: 50–150 g; tubers: 50–100 g	2–4 servings daily (1 serving = 40 g); whole grains should account for more than 50% of total grain intake.
greengrocery	300–500 g daily; dark-colored vegetables should account for more than half of the intake.	Three servings per day (1 serving = 120 g); half of the portion should consist of dark-colored vegetables, with starchy vegetables included.
Fruits	200–350 g daily; fresh fruits are recommended, as fruit juice cannot replace fresh fruits.	Two servings daily (1 serving = 120 g); prioritize whole fruits and limit fruit juices.
Animal-derived/high-quality proteins	Daily intake of 120–200 g (equivalent to 300–500 g of aquatic products, 300–350 g of eggs, and 300–500 g of poultry or livestock meat per week).	Consume 1.2–1.6 g/kg body weight of protein daily; prioritize high-quality, nutrient-dense protein sources.
Milk and dairy products	Daily intake of 300–500 g; liquid milk, yogurt, and cheese are all suitable options.	Three servings per day (1 serving = 240 mL); whole-fat dairy products free from added sugars should be selected.
Soybeans and nuts/nutrient-rich fats	25–35 g daily; 50–70 g of nuts per week	Healthy fats account for 20%-30% of total energy intake; examples include nuts, olive oil, and avocado.
Cooking Oil	25–30 g daily; the use of diverse types of edible oils ensures a balanced supply of fatty acids and nutrients.	The intake of saturated fats should not exceed 10% of the total daily caloric intake, with priority given to oils containing essential fatty acids.
Salt/Sodium	Daily intake <5 g; including hidden salt (e.g., soy sauce, pickled vegetables, etc.)	The recommended daily sodium intake for healthy individuals aged 14 years and older is <2.3 g.
Added Sugar	Daily intake should be <50 g, preferably controlled below 25 g; reduce the use of cooking sugar and decrease consumption of processed foods such as sugary beverages.	Avoid consuming sugary beverages; the sugar content added per meal should not exceed 10 grams.

2.2. Differences Between Key Nutrients and Dietary Recommendations

As shown in Table 1, there are significant differences between the Chinese and American dietary guidelines regarding recommendations for key foods and nutrients, with core focuses on grains, dairy products, and control of salt, oil, and sugar intake, all aligning with their respective national nutritional contexts: For grains, the China guideline emphasizes a "grain-based diet," recommending 50–150 g/day of whole grains to address the current insufficient intake among residents and promotes traditional Chinese consumption patterns [6]; the U.S. guideline positions whole grains as the primary staple food, recommends a daily intake of 80–160 g, mandates that whole grains account for $\geq 50\%$ of the diet, and specifically restricts refined carbohydrates [7]. For dairy products, the China guideline increases the recommended intake to 300–500 g/day while highlighting the importance of soy products [8]; the U.S. guideline eliminates the recommendation for "low-fat milk" and shows less emphasis on soy products [9]. Regarding salt, oil, and sugar control, the China guideline imposes stricter limits (< 5 g/day), emphasizing reductions in hidden salts and control of cooking sugars [10]; the U.S. guideline focuses on reducing salt in food processing and regulating sugary beverages, recommending a sodium intake of < 2300 mg/day [5], with both guidelines requiring added sugars to account for $< 10\%$ of total energy intake.

3. Comparison of Guidance Systems for Special Populations

3.1. China Guidelines: Full life cycle coverage with emphasis on specialized care for "senior citizens"

The "China Dietary Guidelines for Residents (2022)" establishes a "1+9" guidance system for special populations, covering nine categories including women during preconception/pregnancy/breastfeeding periods, infants and young children, preschool-aged children, school-aged children, general elderly individuals, advanced-age elderly individuals, and vegetarians, achieving comprehensive coverage throughout the entire life cycle. The most distinctive feature is the newly added specialized guidance for "advanced-age elderly individuals," tailored to China's aging population context: given that the prevalence of malnutrition exceeds 30% among this group and their chewing and digestive functions decline, recommendations include "softening foods," "eating small frequent meals," and "supplementing essential nutrients," along with suggesting nutritional assessments every three months.

Among other key guidance for specific populations, approximately 50 million vegetarians are advised to emphasize the complementary intake of protein from grains and legumes to prevent vitamin B12 deficiency; for infants aged 0–24 months, detailed recommendations are provided regarding breastfeeding, introduction of complementary foods, and allergy prevention, while preserving traditional Chinese feeding practices (e.g., rice porridge and soft congee).

3.2. U.S. Guidelines: Strengthening "High-Risk Populations" and Adaptation to Multicultural Contexts

The special population framework in the *Dietary Guidelines for Americans, 2025–2030* covers infants and young children, children, adolescents, pregnant women, lactating women, elderly individuals, patients with chronic diseases, and vegetarians, with particular emphasis on providing tailored guidance for high-risk groups to accommodate the diverse social backgrounds of the United States [11]. For infants aged 0–4 years, it explicitly recommends introducing allergenic foods after 6 months of age for the first time and strictly prohibits added sugars in children under 4 years of age. For patients with chronic diseases, it introduces the recommendation for a low-carbohydrate diet for the first time, with a sodium intake limit of < 1500 mg/day for hypertensive patients.

For vegetarians and vegans, it is explicitly recommended to monitor the risk of deficiencies in nutrients such as vitamin B12 and iron, with supplementation through fortified foods or dietary supplements being advised. Concurrently, attention should be paid to "health equity," particularly for

populations with significant nutritional disparities—such as low-income groups and ethnic minorities—by proposing practical recommendations including "low-cost, nutrient-dense meal plans" and "nutrient optimization of community food banks."

4. In-depth Analysis of the Causes of Differences

4.1. Traditional Foundations of Dietary Culture

China's traditional dietary philosophy of "relying on five grains for sustenance, five fruits as supplements, five livestock for benefits, and five vegetables for completeness" has been passed down for millennia. Family cooking and communal dining remain the predominant scenarios, hence the guidelines emphasize culturally appropriate recommendations such as serving individual portions (to prevent foodborne diseases), ensuring ingredient freshness (aligning with household purchasing habits), and avoiding waste (in line with the culture of frugality).

The integration of multicultural elements in the United States has fostered a "fast-food culture" and a reliance on processed foods, with dining out and consumption of prepared meals accounting for over 50% of total food intake, while home cooking remains relatively uncommon. The guidelines emphasize improving dietary environments through food industry standards (e.g., maximum salt and sugar limits for processed foods) and nutritional labeling regulations, aligning with the commercialized food ecosystem.

4.2. National Health Status and Disease Profile

China faces the "dual burden of nutritional deficiency and excess": issues such as iron deficiency in children and calcium deficiency in the elderly remain prevalent, while chronic diseases like obesity, hypertension, and type 2 diabetes are increasingly affecting younger adults. Consequently, the guidelines place greater emphasis on targeted nutrient supplementation (folic acid, iron, iodine) and chronic disease prevention, with more detailed quantifiable standards (e.g., specific amounts of oil, salt, and sugar).

The obesity rate among adults in the United States ranks among the highest in developed countries, with cardiovascular diseases, diabetes mellitus, and colorectal cancer exhibiting strong associations with dietary habits. The guidelines primarily emphasize chronic disease intervention strategies centered on "reducing oil, sugar, and salt intake," highlighting the central role of weight management and imposing stricter restrictions on processed foods and red meat consumption.

4.3. Food Industry and Supply System

In China, traditional home cooking accounts for over 70% of culinary practices, with the food industry primarily focused on primary processing and fresh food supply. The guidelines provide more specific recommendations regarding cooking methods (steaming, boiling, quick-frying), ingredient selection (local and seasonal options), and kitchen hygiene (separation of raw and cooked foods), closely aligning with household dining scenarios.

The United States exhibits a high degree of food industrialization and commercialization, with widespread consumption of processed foods, takeout meals, and fast food. The food supply chain is well-established, and dietary guidelines place greater emphasis on guiding food manufacturers (e.g., reducing salt and sugar additives in processed foods and specifying trans fat limits) as well as enhancing consumers' ability to interpret nutritional labels, thereby aligning with a convenient and commercialized food supply system.

4.4. Policy Orientation and Social Needs

The China Guidelines deeply respond to national policies such as "Healthy China," "Preventing Food Waste," and "Food Security," emphasizing a "sustainable food system." They advocate for the selection of local seasonal ingredients, reduction of food waste, and promotion of healthy dietary culture through food education.

The U.S. guidelines place greater emphasis on the implementation of public health policies, working in tandem with healthcare systems to alleviate the medical burden of chronic diseases, promoting school nutrition lunch programs, and regulating the impact of food advertising on children. The policy focus lies on "food environment governance" and "health equity for all."

5. Insights and References

A comparison of dietary guidelines between China and the United States demonstrates that when improving its dietary guidance system, China can fully draw on American expertise in food environment regulation and population-specific recommendations. This includes accelerating the establishment of upper limits for salt, sugar, and oil content, implementing warning nutrition labels on prepackaged foods, developing age-, gender-, activity-level-, and occupational-specific dietary recommendations, enhancing interdepartmental collaboration, integrating guidelines into food education programs, community health services, and workplace wellness initiatives, and improving practical implementation effectiveness. Considering national circumstances, China should further refine targeted guidance for special populations such as the elderly and vegetarians, utilize visual tools like the balanced diet pyramid, incorporate traditional dietary culture and family-based food education concepts, while strengthening emphasis on combating food waste and promoting sustainable eating habits to establish a dietary guidance system that balances scientific rigor with cultural adaptability. Both countries' guidelines have reached core consensus on principles such as dietary diversity, salt and sugar control, and physical activity balance. Future developments should prioritize personalization, cultural appropriateness, interdepartmental collaboration, and sustainability, gradually shifting from general nutritional recommendations to comprehensive dietary solutions applicable across all scenarios and populations, thereby providing more robust support for public health and food system optimization.

6. Conclusion

The differences between the Chinese and American dietary guidelines result from the combined effects of multiple factors, including regional culture, health challenges, food systems, and policy orientations. There is no absolute superiority or inferiority among them; their core objective is to enhance national health through scientifically sound diets. The advantages of the China guidelines lie in their strong cultural adaptability, comprehensive coverage of special populations, and clear quantitative standards, while the U.S. guidelines stand out for their systematic approach to food environment interventions and flexible personalized guidance.

The development of dietary guidelines should be grounded in local conditions and cultural contexts while incorporating universal achievements in global nutritional science. For the general population, understanding the underlying rationale behind these differences enables more flexible adaptation to individual dietary patterns, facilitating personalized practices of healthy eating. In the future, with advancements in globalization and nutritional science, guidelines from both countries are likely to reach greater consensus and provide valuable references in areas such as innovative healthy dietary models, food environment governance, and whole-life-cycle nutrition management, thereby offering diverse solutions for global dietary health initiatives.

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