

# Nutrient Profile Model for China

Scientific Report
October 2024

Supported by



# **Acknowledgements**

The following project organizations and key members contributed to the development of the Nutrient Profile Model for China:

**Chinese Nutrition Society:** Yang Yuexin, Yang Xiaoguang, Han Junhua, Wang Yingyao, Zhou Jin.

National Institute for Nutrition and Health, Chinese Center for Disease Control and Prevention: Ding Gangqiang, Wang Zhu, Gao Chao, Zhang Jiguo.

Institute of Food and Nutrition Development, Ministry of Agriculture and Rural Affairs: Huang Zeying.

School of Population Medicine and Public Health, Chinese Academy of Medical Sciences & Peking Union Medical College: Zhang Juan.

Shanghai Institute for Pediatric Research: Cai Wei.

**Institute of Nutrition and Health, Qingdao University:** Ma Aiguo, Lv Wanting, Ding Xin.

Maternal and Child Nutrition Center, West China Second Hospital, Sichuan University: Cheng Guo, Qiao Tian.

China Agricultural University: Zhu Chen.

**Deakin University, Australia:** Erica Reeve (international member of the project team).

**UNICEF Office for China:** Ali Shirazi, Anuradha Narayan, Chang Suying, Zhu Xinya.

WHO China office: Cui Ying.

Vital Strategy: Cao Ying, Ge Zeng.

Project Team Secretary: Qiu Mengjie, Wang Yan.

International consultant for the project team: Mike Rayner (University of Oxford), Barry M. Popkin (University of North Carolina at Chapel Hill), Chantal Julia (University of Sorbonne Paris Nord), and Alison Tedstone (Chair of the Association for Nutrition, United Kingdom, and former Chief Nutritionist, Public Health England).

We also appreciate the valuable thoughts and suggestions from the experts working at other relevant departments and institutions.

# **Terminology**

**Nutrient profiling:** A scientific method for classifying or ranking foods according to their nutritional composition for reasons related to preventing disease and promoting health. Nutrient profile models represent the practical application of nutrient profiling for specific objectives.

**Energy:** The calorie produced by components such as proteins, fats and carbohydrates contained in food during human metabolism. Energy intake is calculated based on the sum of the products of energy-yielding components and their corresponding energy conversion factors: protein 17 kJ/g, fat 37 kJ/g, carbohydrates 17 kJ/g, dietary fibre 8 kJ/g.

**Fat:** The oil constituents from vegetable or animal foods; fat, also known as triglycerides, is composed of fatty acids and glycerol.

**Sugar:** Specifically referring to the sum of fructose, glucose, sucrose, maltose and lactose in foods.

**Sodium:** The total sodium from various forms of sodium compounds in foods.

**Marketing:** Any form of commercial communication or messaging that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services, including but not limited to advertising, product and service promotions, and digital marketing.

# **Contents**

Acknowledgements	01
Terminology	<b>02</b>
Introduction	<b>0</b> 4
International overview of nutrient profile models	06
Purpose of developing the Nutrient Profile Model for China	07
Methodology of the Nutrient Profile Model for China	08
Results and application recommendations of the Nutrient Profile Model for China	11
Reference	13
Appendix: Food categories, definitions and examples in the Nutrient Profile Model for China	15

# Introduction

At this critical juncture in building a "Healthy China", unhealthy dietary patterns have emerged as a significant public health challenge. According to the *Global Burden of Disease* study (2017), excessive consumption of high-sodium, high-fat, and high-sugar foods, combined with insufficient intake of whole grains and fresh fruits and vegetables, is now one of the primary dietary risk factors for the Chinese population.

Unhealthy eating habits also adversely impact children and adolescents. The *Report on the Nutrition and Health Status of the Chinese Population* (2020) reveals that the obesity rate among children and adolescents aged 6 to 17 has reached 7.9%, a stark increase from 0.2% in 1982. Overweight and obesity in childhood not only affect metabolic health; they can also impact academic performance, self-esteem and long-term health outcomes. These conditions increase the risk of chronic diseases in adulthood, such as cardiovascular disease and diabetes.

Numerous studies, both domestically and internationally, have shown that unregulated food marketing is a key factor in shaping unhealthy eating behaviours among children and adolescents. Television and online advertising, particularly for high-sugar, high-fat and highly palatable foods, significantly increases children's and adolescents' intake of energy, fat and sodium, contributing to rising rates of overweight and obesity.

The Chinese Government places a strong emphasis on the health of children and adolescents. Several policies and regulations have been introduced to improve children's nutrition and promote healthy dietary habits, including the *Healthy China 2030 Plan*, the *National Nutrition Plan (2017–2030)*, the *Healthy China Action (2019–2030)*, and the *Implementation Plan for Childhood and Adolescent Obesity Prevention and Control*. In addition, the National Health Commission launched the "Three Reductions and Three Healthy Conditions" campaign, advocating for reduced intake of salt, oil and sugar, especially among children and adolescents. The *Chinese Dietary Guidelines (2022)* further emphasize the importance of a healthy diet for children, encouraging the cultivation of healthy eating habits from a young age and discouraging the consumption of foods high in salt, fat or sugar.

To combat childhood overweight and obesity and create a healthy food environment, international organizations recommend that nutrient profiling models be used to categorize and rank foods by assessing their nutritional quality. Nutrient profiling models are used to provide a scientific basis for policy development. WHO and numerous countries have already adopted nutrient profile models to promote front-of-package labelling, restrict food marketing

to children, regulate health claims on food labels, and encourage product reformulation by the food industry.

In alignment with the *Healthy China Strategy* and the *Law on the Protection of Minors*, and to safeguard the physical health of children and adolescents with support from UNICEF, the Chinese Nutrition Society and the National Institute for Nutrition and Health of the Chinese Center for Disease Control and Prevention (CDC), in collaboration with domestic and international academic institutions, have developed the Nutrient Profile Model for China after nearly three years of efforts. The model is based on scientific evidence and aims to inform regulate the marketing of high-sugar, high-fat and high-salt foods to children and adolescents, while guiding the food industry towards healthier products.

This report summarizes the scientific process, key findings and practical recommendations from the development of this model. It is hoped that this effort will provide a valuable reference for policymakers and contribute to reducing the negative impact of unhealthy food advertising and other marketing strategies on children and their families, and support the promotion of balanced diets, obesity prevention, and the creation of a healthier food environments for children and adolescents.

# International overview of nutrient profile models

WHO defines nutrient profiling as "the science of classifying or ranking foods according to their nutritional composition for reasons related to preventing disease and promoting health". Nutrient profiling assists countries in developing public health interventions aimed at improving dietary health based on local conditions. Key applications include, but are not limited to: front-of-package labelling for prepackaged foods; restricting marketing of unhealthy foods and non-alcoholic beverages to children; establishing nutrition or health claim policies; implementing taxation policies to limit consumption of unhealthy foods; promoting reformulation by food companies; and regulating school food environments, including cafeterias and vending options.

Currently, based on local health needs and dietary conditions, numerous countries and regions have developed various nutrient profile models using nutrient profiling methods and have dynamically adjusted them according to changes in diet and public health status.

In recent years, as the global burden of obesity and chronic diseases has intensified, the development and implementation of nutrient profile models have gained increasing attention from countries worldwide. Currently, more than 60 countries have adopted and applied nutrient profile models, playing a vital role in guiding dietary practices across different regions. The development of these models follows rigorous international standards and evidence-based criteria. Among the most well-established models are the *World Health Organization Nutrient Profile Model for the Western Pacific Region, the Pan American Health Organization Nutrient Profile Model, the World Health Organization Regional Office for Europe Nutrient Profile Model, the United Kingdom Nutrient Profile Model by the Food Standards Agency (UK Ofcom FSA), and the Food Standards Australia New Zealand Nutrient Profiling Scoring Criterion and Health Star Rating System (FSANZ NPSC HSR). These models are widely used in various countries and regions to promote healthier diets.* 

# Purpose of developing the Nutrient Profile Model for China

To implement the *Law on the Protection of Minors*, promote child health, and prevent the excessive intake of fat, salt, and sugar, which contribute to childhood overweight and obesity, it is essential to develop a nutrient profile model suited to China's needs. This model enables the assessment of various food products. If the content of total sodium, total fat, or total sugar in a particular food exceeds the established threshold for its category, it is deemed unsuitable for marketing to children and adolescents. Government agencies, academic institutions, and industry associations can use the thresholds provided in this report to develop more detailed and effective regulations and policies, ensuring that regulatory measures are properly implemented.

In this report, "marketing" follows the international definition, referring to any form of commercial promotion or communication designed to increase the recognition, attractiveness, and/or consumption of products or services. This includes, but is not limited to, digital marketing, advertising or promotional activities for products and services. Examples of common marketing practices targeting children and adolescents include:

- 1. Products explicitly labelled as suitable for children, such as those with terms like "children" or "growth" in their names.
- 2. The use of cartoons or other imagery that appeals specifically to children and adolescents.
- 3. Marketing activities in physical or virtual spaces where children and adolescents are the primary audience, such as schools, children's entertainment venues, children's television programmes or online platforms, print media, and publications.

As the food industry evolves and manufacturers adjust product formulations, the nutrient content of foods continues to change. Therefore, the thresholds in the nutrient profile model would be dynamically adjusted in the future based on the effectiveness of related policies. Ultimately, the goal is to gradually create a healthier food environment that protects the health of children and adolescents.

# Methodology of the Nutrient Profile Model for China

In October 2021, the Chinese Nutrition Society, the National Institute for Nutrition and Health of the China CDC and UNICEF initiated the development of the Nutrient Profile Model for China. A project working group, expert advisory panel and international advisory committee were established to guide the scientific research process.

The project group conducted a systematic review of global nutrient profile models, front-of-pack labelling for prepackaged foods, and policies regulating the marketing of unhealthy foods to children. Through a detailed comparison of the scientific basis, implementation effects, and relevance to China, the team decided to reference the WHO Nutrient Profile Model for the Western Pacific Region to create a China-specific model aligned with the country's current needs.

Over the next three years, the project group followed these key steps to develop the model for China:

### Step 1: Defining the aim and scope of model.

The primary objective was to limit the marketing of "high-salt, high-fat, high-sugar" foods and non-alcoholic beverages to children and adolescents, promoting healthier food development.

## Step 2: Identifying index nutrients for the model.

Based on the nutrition and health status of children in China, food consumption patterns, and related policies, the project group studied the risk factors for overweight, obesity and non-communicable diseases in children. Both international and domestic nutrient labelling standards and food classification systems were compared, incorporating data from the *Chinese Dietary Guidelines (2022)* and the *Dietary Reference Intakes for China (2023)*. In addition, considering the nutrients that are mandatory for displaying on food labelling requirements as per the GB 28050 National Food Safety Standard, total sodium, total fat, and total sugar were identified as the index nutrients for the model.

## Step 3: Determining appropriate food categories for the model.

Using the databases of China Nutrition and Health Surveillance and the China Health and Nutrition Survey, the project group analyzed dietary intake data of children and adolescents, including the proportion of energy intake from different food categories across various age groups, as well as their contribution to limiting nutrients (sodium,

total fat, and total sugar). According to the results of the survey on the consumption of prepackaged food among school-age children and adolescents in five provinces and one city in China, the food categories with high consumption frequency by children and adolescents received special attention in the development of the model.

Categories were determined with reference to the "Food Classification System" of GB 2760-2014 National Food Safety Standard for Food Additives, WS/T 464-2015 Regulation of Food Composition Data Expression, and the WHO Western Pacific Region NPM.

The model's food classification covered all foods except infant formula, foods for special medical purposes, dietary supplements and alcoholic beverages. Fresh foods, prepackaged foods, and both ready-to-eat and precooked foods, are all included.

# **Step 4: Analyzing nutrient distribution in food categories.**

After collecting and organizing nutrient data from both food labels and measured values, a comprehensive nutrient database<sup>1</sup> was developed, covering key macronutrients like energy, carbohydrates, protein, total fat, sodium, and sugar. Laboratory tests were conducted to verify some data, particularly total sugar content. Through the classification and summarization of over 20,000 prepackaged food data entries against categories in Step 3, the distribution of different percentiles for various nutrients in each food category were analyzed.

# Step 5: Developing the model algorithms and protocol of thresholds.

The project group, by referencing the methodologies from various nutrient profile models such as the WHO's nutrition profiling models for the Western Pacific Region and Pan American Health Organization Nutrient Profile Model, determined that:

- (1) 100g would be an appropriate calculation benchmark for the selection of food.
- (2) The system for identifying thresholds considered both population dietary goals (Threshold A), and the nutritional composition of the food supply it was targeting (Threshold B).
- (3) <u>Threshold A</u> is the maximum level at which sodium (mg), total fat (g) and total sugar (g) composition would exceed recommended contributions to total energy intake/100 g. Consumption of foods high in any one of those nutrients increases the likelihood of individuals consuming excessive levels of those nutrients. According to the *Dietary Reference Intakes for China (2023)* and the *Chinese Dietary Guidelines (2022)*, the recommended daily energy intake for adults is 2,000kcal, in which:

<sup>&</sup>lt;sup>1</sup> China's Prepackaged Food Database from the National Institute for Nutrition and Health, China CDC

- Total sodium intake should not exceed 2,000 mg/d, equal to 1 mg per kcal of energy.
- Energy (kcal) from total fat should not comprise more than 20%~30% of the total energy of that product.
- Energy (kcal) from total sugar should not comprise more than 10% of the total energy in that product.
- (4) <u>Threshold B</u> represents the fiftieth percentile (median) fat (g/100g) and sodium (mg/100g) composition of products in each food category, calculated using data from the prepackaged food database mentioned above. This percentile was decided through Delphi consultation method.
- (5) <u>Threshold A</u> and <u>Threshold B</u> were averaged to generate a <u>Weighted Threshold</u>. These thresholds were taken to a consultation process in China that resulted in variations to the thresholds based on the principles listed below:
  - For the threshold, fat and sugar should be revised to 1g, and sodium should be revised to 50mg.
  - Adjust the appropriate thresholds of sodium, fat and sugar based on the distribution range of sodium, fat and sugar content levels of various types of foods, and comprehensively consider the recommended intake of sodium, fat and sugar of Chinese residents, the requirements of food processing technology and food consumption.

### Step 6: Validating the model's feasibility.

The project group held multiple expert consultations with domestic and international participants to discuss and verify the model's algorithm and thresholds, ensuring accuracy and feasibility, and establishing clear criteria for determining which foods could or could not be marketed to children. The group also compared the model with international standards such as WHO Western Pacific Region NPM to validate the thresholds for different food categories.

This scientific report on the Nutrient Profile Model for China provides a comprehensive approach, though it may still require refinement. The project group will continue to monitor the application of model in China, gather feedback, and provide scientific support for future policymaking aimed at regulating the marketing of unhealthy foods to children to promote a healthy food environment.

# Results and application recommendations of the Nutrient Profile Model for China

Focusing on the core objective of protecting the health of children and adolescents and reducing the risks of overweight and obesity, the Nutrient Profile Model for China has been developed based on the nutritional characteristics and content levels of various food categories. **The following are the model's recommendations for application:** 

### 1.Food Categories Exempted from Marketing Restrictions:

In line with the recommendations of the Chinese Dietary Guidelines (2022), it is advised to prioritize the consumption of whole, fresh grains, fruits, vegetables, dairy products, and soy-based foods, as well as to consume fish, poultry, eggs, and lean meat in moderation. The nutrient profile model does not impose any marketing restrictions for natural whole foods or those subjected to minimal physical processing (e.g., drying, grinding, milling, refrigeration, or freezing).

# 2. Food Categories for Which Marketing is Automatically Not Permitted:

No specific thresholds are set for <u>confectionary</u> and <u>seasoned flour and</u> <u>starchy products</u>, as they are considered unsuitable for marketing to children and adolescents.

# 3. Food categories with thresholds that restrict marketing:

This model establishes threshold criteria for 13 specific food categories, including baked goods, ready-to-eat convenience foods, and beverages (Table 1). If the sodium, fat, or sugar content in any food exceeds the designated threshold, it is recommended that the product should not be marketed to children and adolescents. Additionally, if a product contains industrially produced trans-fatty acids with an energy contribution exceeding 1% or an alcohol content of  $\geq 0.5\%$ , it is advised to restrict marketing of that product as well.

Although the model does not include restrictions on the use of sweeteners or other food additives, this should not be interpreted as an endorsement for manufacturers to broadly employ non-sugar sweeteners.

Table 1. Food categories for which marketing should be restricted when thresholds are exceeded (/100 g)

Food ca	ategories	Total Fat	Total Sodium	Total Sugar
Baked goods	pastry	17g	500mg	15g
	biscuits	20g	500mg	15g
	bread	11g	350mg	11g
Ready-to-eat convenience food	instant rice and noodles	12g	350mg	
convenience rood	frozen rice and flour-based products and mixed foods	8g	300mg	
	other ready-to-eat foods	8g	300mg	
Savoury snacks	puffed food	20g	500mg	
	nuts and seeds		600mg	
	other savoury snacks	20g	500mg	
Ready-to-eat or instant cereals		13g		15g
Beverages				5g
Frozen drink		9g		10g
Milk and dairy products	liquid milk			5g
products	fermented milk			10g
	cheese	18g	500mg	
Wet and dried noodle			500mg	
Processed meat and aquatic products	processed meat products	9g	750mg	
aquatic products	processed aquatic products	11g	900mg	
Processed fruit and vegetable products			500mg	11g
Soy products		12g	600mg	
Condiments			800mg	
Eggs and egg products		9g	500mg	

<sup>\*</sup>Milk powder and solid beverages are converted according to their dilution ratios.

# Reference

- 1. GBD 2017 Diet Collaborators. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. Lancet. 2019;393(10184):1958-1972. doi: 10.1016/S0140-6736(19)30041-8.
- 2. Disease Control and Prevention Bureau in National Health Commission. Report on the nutrition and chronic disease status of Chinese residents (2020). Beijing: People's Health Publishing House; 2021.
- 3. Boyland E, et al. Association of food and nonalcoholic beverage marketing with children and adolescents' eating behaviors and health: a systematic review and meta-analysis. JAMA Pediatr. 2022;176(7). doi: 10.1001/jamapediatrics.2022.1037.
- 4. Xian J, Zeng M, Cai Z, Xie C, Xie Y, Sharma M, et al. Influence of the request and purchase of television advertised foods on dietary intake and obesity among children in China. BMC Public Health. 2021;21(1):1130. doi: 10.1186/s12889-021-11130-3.
- 5. World Health Organization. A framework for implementing the set of recommendations on the marketing of foods and non-alcoholic beverages to children. Geneva: World Health Organization; 2012.
- 6. Chinese Nutrition Society. Scientific research report on the Dietary Guidelines for Chinese Residents 2021. Beijing: People's Health Publishing House; 2021.
- 7. World Health Organization Regional Office for Europe. WHO Regional Office for Europe nutrient profile model. Copenhagen: WHO Regional Office for Europe; 2015.
- 8. Santos M, Rito AI, Matias FN, et al. Nutrient profile models a useful tool to facilitate healthier food choices: a comprehensive review. Trends Food Sci Technol. 2021;110:4-15. doi: 10.1016/j.tifs.2021.02.019.
- World Health Organization Regional Office for Europe. Manual to develop and implement front-of-pack nutrition labelling: guidance for countries on the selection and testing of evidence-informed front-of-pack nutrition labelling systems in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2020.
- 10. Chinese Nutrition Society. Guidelines for the use of the "Healthy Choice" label on prepackaged food. 2018.
- 11. World Health Organization. Pan American Health Organization Nutrient Profile Model. Washington, DC: PAHO; 2016.

- 12. World Health Organization Regional Office for South-East Asia. WHO nutrient profile model for South-East Asia Region. New Delhi: WHO Regional Office for South-East Asia; 2016.
- 13. World Health Organization Regional Office for the Western Pacific. WHO Nutrient Profile Model for the Western Pacific Region: a tool to protect children from food marketing. Manila: WHO Regional Office for the Western Pacific; 2016.
- 14. World Health Organization Regional Office for the Eastern Mediterranean, Rayner M, Jewell J, et al. Nutrient profile model for the marketing of food and non-alcoholic beverages to children in the WHO Eastern Mediterranean Region. Cairo: WHO Regional Office for the Eastern Mediterranean; 2017.
- 15. 15. World Health Organization Regional Office for Africa. Nutrient profile model for the WHO African Region: a tool for implementing WHO recommendations on the marketing of foods and non-alcoholic beverages to children. Brazzaville: WHO Regional Office for Africa; 2019.

# Appendix: Food categories, definitions and examples in the Nutrient Profile Model for China

S S	Food categories	Definition or explanation	Examples	Reference standard
	Natural whole foods	For natural whole foods or those subjected to minimal physical processing (e.g., drying, grinding, milling, refrigeration, freezing), no marketing restrictions are applied under this Nutrient Profile Model.	Fresh vegetables and fruits, meat, plain flour	
-	Confectionery	Confectionery includes candy, chocolate and chocolate products, cocoa butter substitutes and their products, and jelly.  Candy: sweet foods primarily made from sugar, syrup or sweeteners, processed through relevant techniques; Chocolate: solid or semisolid foods at room temperature made from cocoa products (cocoa butter, cocoa mass or cocoa liquor), sugar, with or without added dairy products or food additives; Chocolate products: foods made by mixing chocolate with other ingredients, processed to maintain a solid or semi-solid state at room temperature; Cocoa butter substitute (where the amount of cocoa butter substitute exceeds 5%), with or without added cocoa products, dairy or food additives, processed to have the flavour and texture of chocolate; Cocoa butter substitute chocolate products: foods made by mixing cocoa butter substitute chocolate with other ingredients, processed to maintain a solid or semi-solid state at room temperature; Jelly: a gelatinous food made from water, sugar and thickening agents, with or without added fruit and vegetable products, dairy or other ingredients, processed through dissolving, mixing, filling, sterilizing and cooling.	Hard candies, milk chocolate, blueberry jelly	GB17399-2016 GB9678.2-2014 GB19299-2015
2	Seasoned flour and starchy products	Products made from wheat flour as the main ingredient, processed through mixing, extrusion, shaping, seasoning, and packaging for ready-to-eat consumption.	Spicy strips, spicy chips	QB/T 5729-2022 T/ZZFSA001-2020

N S	Food categories		Definition or explanation	Examples	Reference standard
m	Baked goods		Baked goods include pastry, biscuits and bread.		
		Pastry	Foods made from one or more main ingredients such as grains, beans, tubers, oils, sugars and eggs, with or without other ingredients, processed through mixing, shaping and baking, possibly with added cream, egg whites, cocoa or jams.	Mooncakes, yolk pies, flower cakes, red bean cakes	GB7099-2015
		Biscuits	Foods made from grain flour (or bean and tuber flour), with or without added sugar, fats, or other ingredients, processed through mixing (or batter preparation), shaping, and baking (or frying), sometimes with fillings or coatings such as cream, egg whites or chocolate.	Egg roll, waffles, sandwich biscuits	GB7100-2015
		Bread	Foods made from wheat flour, yeast, and water, with or without added ingredients, processed through mixing, fermentation, shaping, proofing and baking, sometimes with added cream, egg whites, cocoa or jams on the surface or inside.	Whole wheat bread, filled bread, butter bread	GB7099-2015
4	Ready-to-eat convenience food		Ready-to-eat convenience foods include instant rice and noodles, frozen flour-based and mixed foods, and other ready-to-eat convenience foods.		
		Instant rice and noodles	Instant rice: made from rice processed through a-gelatinization and dehydrated by hot air or freezing, rehydrated with water for consumption; Instant noodles: made from wheat flour and/or other grains, processed into noodle cakes with or without seasoning.	Instant noodles, instant rice	GBT 31323-2014 GB 17400-2015
		Frozen rice and flour-based products and frozen prepared foods	Frozen rice and flour-based products: made from wheat, rice, corn or other grains, possibly with fillings, processed and frozen; Frozen prepared foods: made from grains, beans, tubers, meat, eggs, dairy, seafood, fruits or vegetables, processed and frozen.	Dumplings, steamed buns, wonton, rice balls	GB19295-2021 GB/T23786-2009
		Other ready- to-eat foods	Primarily refers to freshly made and sold foods such as hamburgers, pizzas and pancakes.	Hamburgers, sandwiches, pizza	

No.	Food categories		Definition or explanation	Examples	Reference standard
5	Savoury snacks		Savoury snacks include puffed food, nuts and seeds, another savory snacks.		
		Puffed food	Foods made from grains, tubers, beans, fruits, vegetables or nuts, processed through puffing to create a light or crispy texture.	Potato chips, french fries,	GB17401-2015
		Nuts and seeds	Foods made from nuts, seeds or their kernels, processed through various methods.		GB19300-2014
		Other savoury snacks	Savoury snacks that do not fall under the above categories.	Seaweed snacks, baked bread slices	
v	Ready-to-eat or instant cereals		Made primarily from grains or starchy raw materials, with or without added ingredients, processed through cooking, drying or other methods for direct consumption or after mixing with water or heating.	Breakfast cereals, sesame paste, lotus seed soup, lotus root soup, mixed bean porridge, cereal bars, congee	GB19640-2016
7	Beverages		Beverages: made from one or more edible raw materials with or without added ingredients, food additives, or nutrients, processed and packaged for direct consumption or after mixing with water, with an alcohol content not exceeding 0.5%.	Carbonated drinks, fruit juices, protein drinks, coffee/tea drinks, solid drinks	GB 7101-2022 GB/T 10789-2015
			<b>Sports drinks:</b> formulated to replenish fluids, electrolytes, and energy lost during physical activity, designed for rapid absorption.	Sports drinks	GB 15266-2009

S S	Food categories		Definition or explanation	Examples	Reference standard
∞	Frozen drink		Using drinking water, sugar, milk, dairy products, fruit and vegetable products, legumes, and edible oils as the main ingredients, with or without the addition of other auxiliary materials, food additives and food fortifiers, these solid or semi-solid foods are produced through processes such as mixing, pasteurization or sterilization, and freezing or chilling. This category includes ice cream, ice lollies, sherbet, popsicles, sweetened ice and edible ice.	Ice cream, popsicle, sorbets	GB 2759-2015 GB/T31114-2014 GB/T31119-2014
σ	Milk and dairy products	Liquid milk	Including liquid milk, fermented milk and cheese.  Liquid milk includes pasteurized milk, sterilized milk and processed milk.  Pasteurized milk: a liquid product made from raw cow's (or goat's) milk using pasteurization. Ultra-high temperature (UHT) milk: a liquid product made from raw cow's (or goat's) milk, with or without added reconstituted milk, heated to at least 132°C for a very short time and then packaged in a sterile environment. Shelf-stable milk: a liquid product made from raw cow's (or goat's) milk, with or without added reconstituted milk, sterilized after packaging and sealing, regardless of any pre-heating treatment. Processed milk: a liquid product made from no less than 80% raw cow's (or goat's) milk or reconstituted milk, with added ingredients, food additives or nutritional supplements, processed using appropriate pasteurization or sterilization methods.	Pure milk, breakfast milk	GB19645-2010 GB25190-2010 GB25191-2010
		Fermented milk	Fermented milk: Products made from raw cow's (or goat's) milk or milk powder that have been pasteurized and fermented, resulting in a lower pH. Includes yogurt. Flavoured fermented milk: made from more than 80% raw cow's (or goat's) milk or milk powder, with added ingredients, food additives or nutrition fortifier, and flavoured with fruit, vegetables or grains.	Flavoured yogurt, fruit yogurt	GB19302-2010

S S	Food categories		Definition or explanation	Examples	Reference standard
		Cheese	Cheese includes cheese, processed cheese and cheese products.  Cheese: ripe or unripened soft, semi-hard, hard or extremely hard, coated dairy product, where the whey protein/casein ratio does not exceed the corresponding ratio in milk (excluding whey cheese).  Processed cheese: made from cheese (more than 50%) with additional ingredients, food additives and/or nutritional supplements, processed through heating, stirring, emulsifying (or drying). Cheese products: Made from cheese (15%-50%) with additional ingredients, food additives and/or nutrition fortifier, processed through heating, stirring, emulsifying (or drying).	Cheese sticks	GB 5420-2021 GB 25192-2022
10	Wet and dried noodles		Made from one or more main ingredients such as grains, beans or tubers, mixed with water, with or without added salt or sodium carbonate, processed through kneading, cutting and drying.	Egg noodles, udon, rice noodles	
1	Processed meat and		Includes processed meat products and animal-derived seafood products.		
	products	Processed meat products	Foods made from livestock or poultry meat, processed through selection, shaping (or filling) and packaging. These products include cured meat products, marinated meat products, smoked and barbecued meat products, dried meat products, meat sausages and canned meat.	Jerky, sausages, bacon, luncheon meat	GB/T 26604-2011 GB 2726-2016 GB 2730-2015
		Processed seafood products	Animal-based seafood products: These are products made from fresh or frozen animal aquatic materials, with or without additional ingredients, processed through various techniques. This category includes ready-to-eat, pre-prepared and other animal aquatic products.  Ready-to-eat seafood products: These can be consumed directly without further cooking, including both raw and cooked items. Preprepared seafood products: Made from fresh or frozen materials, with or without additional ingredients, these products undergo processes such as marinating, drying, seasoning and battering. They are not ready for direct consumption and include salted products, dried products, surimi, frozen battered items and semi-finished products such as breadcrumb-coated fish fillets. This category excludes raw products that are simply cleaned and frozen.	Squid slices, seafood cans, dried fish	GB 10136-2015

Ö	Food categories		Definition or explanation	Examples	Reference standard
12	Processed fruit		Including processed fruit and vegetable products.		
	and vegetable products	Processed fruit products	Processed fruit products: This category includes candied fruits, preserved fruits, dried fruits, fruit cakes, fruit pastes, fruit leather and jams. The subcategories are defined as follows:	Dried fruit, tinned fruit, jam and fruit puree, preserves,	GB/T 10782-2021 GB 14884-2016 SB/T 11025-2013
			Candied fruits: Products made from fruits or vegetables as the main ingredients, with or without added food additives and other ingredients, processed through sugaring, honeying or salting. This includes candied fruits, preserved fruits, dried fruits, fruit cakes and fruit leather. Preserved fruits: Products made from ingredients that have been sugared and dried, with a slightly translucent appearance and little or no sugar frosting on the surface. Dried fruits: Made from fresh fruits, processed through sugaring and drying. Fruit paste: Processed fruits formed into shapes and dried (or not), available as cakes, strips (fruit peels), slices, or pellets. Jam: A spreadable product made from fruits, fruit juices, or fruit purees, processed through pretreatment, cooking, mashing (or crushing), mixing, concentrating and packaging.	etc.	GB/T 22474-2008
		Processed vegetable products	All kinds of vegetable products made from fresh vegetables as main raw materials and processed into food, such as pickled vegetables with soy sauce, dried vegetable products, edible mushroom products and other vegetable products.	Pickles, sauerkraut, canned vegetables	GB2714-2015 GB 7096-2014
13	Soy products		Food products processed from soybeans or mixed beans, including fermented and non-fermented soy products and soy protein isolates, processed from primary ingredients.	Tofu, dried bean curd	GB 2712-2014
41	Condiments		Professional food flavour enhancers used to balance taste and aroma, with functions including odour removal, freshness enhancement, and flavour intensification.	Soy sauce, vinegar, salad dressing, bean-based sauce, tempeh	GB/T 20903-2007 GB 2717-2018 GB 2719-2018 GB 31644-2018 GB 10133-2014

No.	Food categories	Definition or explanation	Examples	Reference standard
15	Eggs products	Egg products includes liquid egg products, dried egg products, frozen egg products, and reprocessed eggs.  Liquid egg products: Egg products made from fresh eggs that have been shelled and processed into products such as whole egg liquid, egg yolk liquid and egg white liquid.  Dried egg products: Made from fresh eggs that have been shelled, processed, desugared and dried into products like whole egg powder, egg yolk powder and egg white powder.  Frozen egg products: Made from fresh eggs that have been shelled, processed and frozen, such as frozen whole eggs, frozen egg yolk and frozen egg white.  Reprocessed eggs: Made from fresh eggs, with or without added ingredients, processed through methods such as salting, alkalization, fermentation or brining. Examples include preserved eggs (century eggs), salted eggs, salted egg yolks, fermented eggs and brined eggs.	Preserved eggs, salted egg yolks	GB 2749-2015

Note: When applying this model, the main raw material of the food is usually used to determine the food category to which it belongs.

