SPREADING THE PROBLEM

Addressing the nutritional content of UK syrups, jams and sweet spreads



Action on Salt & Sugar

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OVERVIEW

Sweet and nut spreads are widely consumed in the UK, yet many contribute excess calories and contain high levels of saturated fat and sugars [1]. In the context of the UK's persistently high sugar intake, this presents a substantial public health problem. Average UK sugar intake remains over double the recommended limit, contributing to approximately 10% of total energy intake in both adults and children [2].

This report provides a comprehensive analysis of 834 spreads sold across major UK retailers, including jams and fruit spreads, honey, syrups, chocolate spreads, nut butters, nut creams, yeast extracts and other sweet spreads. Products were assessed for their nutritional composition, front-of-pack nutrition labelling classifications, level of processing, price, and healthiness according to both 2004/05 and 2018 Nutrient Profiling Model (NPM).

KEY FINDINGS

78% of spreads were high in **total sugars**

86% and 83% spreads were classified as **'less healthy'** under the 2004/05 and 2018 NPM, respectively

Paying more doesn't mean less sugar. Higher-priced spreads contained higher average sugars content at 60.1g/100g, compared with 45.8g/100g for standard-priced products



Chocolate spreads were the worst category, with **86% high in sugars** and **91% high in saturated fat**

More than half (**53%**) were classed as **ultra-processed**



RECOMMENDATIONS

1. **Extend advertising and promotion restrictions** to include a broader range of less healthy food categories, including sweet spreads.
2. **Apply the updated 2018 Nutrient Profiling Model** to existing and future policies.
3. **Strengthen transparency** through **Healthier Food Targets** and **Reporting** to improve accountability and encourage healthier food reformulation.
4. **Improve and mandate front-of-pack nutrition labelling** to help consumers make informed choices and encourage healthier product reformulation.

BACKGROUND

In the UK, free sugars account for an average of 10.5% of energy intake among children and 10.0% among adults, around twice the recommended maximum of 5% [2]. Among adults, sugar, preserves and confectionery are the second largest contributor to free sugar intake, accounting for around 24% to 26% free sugars intake [2].

Sweet and nut spreads include a wide range of products, from jams, honey and syrups to chocolate spreads and nut butters. Although these products differ considerably in their ingredients and nutritional composition, many sweet spreads contain high levels of sugars [3, 4].

The UK Government introduced a voluntary sugar reduction programme in 2016 to reduce sugar intakes, challenging the food industry to reduce sugar by 20% by 2020 across selected food categories, including sweet spreads and sauces [3]. However, progress has been mixed. Between 2015 and 2020, the sales-weighted average sugar content of sweet spreads and sauces fell by only 10.1%. The final progress report attributed much of this reduction to an increase in the proportion of sales from peanut butter, which contains substantially less sugar than other sweet spreads, rather than to reformulation alone [5]. Over the same period, total sales of sugar from this category increased by 24.5% and total volume sales by 32% [5].

These findings highlight the importance of looking beyond category averages to examine the nutritional composition of individual products currently available to consumers. This report assesses nutritional content across and within spread categories, alongside front-of-pack nutrition labelling classifications, NPM classifications, price, and level of processing, which can provide a clearer picture of where progress has been made and where further reformulation remains possible



FINDINGS

This report presents a detailed analysis of the nutritional composition of 834 spread products available across major retailers in England. Products included jams and fruit spreads, honey, syrups, chocolate spreads, nut butters, nut creams, yeast extracts and other sweet spreads. Nutritional composition was assessed both per 100g and using standardised serving sizes to allow comparisons between products and categories.

Further details of the methodology and inclusion criteria are provided in the Annex.

SUGARS CONTENT

Across all products, spreads contained an average of 49.7g of total sugars per 100g, although there were substantial differences between categories (Table 1). Honey had the highest average sugars content at 77.8g/100g, followed by syrups (63.3g/100g) and jams and fruit spreads (55.2g/100g). Nut creams and chocolate spreads contained an average of 50.5g and 41.8g of sugars per 100g, respectively. In contrast, nut butters contained considerably less sugars, averaging 6.4g/100g.

Sugars content also varied within individual categories. For example, honey products ranged from 55.9 to 85.9g/100g, while chocolate spreads ranged from 0.6g to 61.0g/100g, and syrups from 0g to 87.6g/100g. These differences highlight that products within the same category do not necessarily have the same nutritional composition.

WIDER NUTRITIONAL COMPOSITION

The nutritional differences extended beyond sugars. Chocolate spreads and nut creams contained substantial amounts of saturated fat, averaging 8.3g and 8.6g per 100g, respectively. Nut butters had the highest average energy content (616kcal/100g) and total fat content (50.1g/100g), although their average sugars content was considerably lower than that of most sweet spreads. Chocolate spread and nut creams are also high in energy (545kcal/100g and 566kcal/100g, respectively). Yeast extracts had a markedly different nutritional profile, containing little sugars or fat but the highest average salt content (8.3g/100g).

These findings highlight the different nutrients of concern across spread categories. While sugars were the main concern for honey, syrups and jams, chocolate spreads and nut creams combined high sugars content with substantial amounts of saturated fat. Yeast extracts were primarily a concern because of their salt content.

NUTRITIONAL CONTENT PER SERVING

Since spreads are generally consumed in small quantities, the nutritional content was also assessed using standardised serving sizes based on the most commonly reported manufacturer serving size. A 15g serving was used for all categories except yeast extracts, for which a 4g serving was used.

These figures are based on the most common serving size stated on pack, which may not reflect how much people actually consume. Actual intake may therefore be higher.

WHAT DOES THIS LOOK LIKE IN PRACTICE?

Even a single serving can provide a substantial share of a child's daily sugars limit. Children aged 7 to 10 are recommended to have no more than 24g of free sugars a day. One 15g serving of honey contains an average of 11.7g sugars, equivalent to almost half (49%) of this limit. A 15g serving of jam (8.3g) is equivalent to around a third (35%) (Table 1).



Table 1. Mean nutritional content per 100g and per standardised serving, by spread category

Category (no. of products)	Energy (kcal)	Saturated fat (g)	Total sugars (g)	Energy per serving (kcal)*	Saturated fat per serving (g)*	Sugars per serving (g)*	% of child daily maximum sugars **	% of adult daily maximum sugars**
All spreads (834)	**372 (4–688)**	**2.7 (0–20)**	**49.7 (0–87.6)**	**NA*** **	**NA**	**NA*** **	**NA*** **	**NA**
Jams and fruit (301)	235 (34–356)	0.1 (0–10)	55.2 (2.4–70.7)	35	0.0	8.3	35	28
Honey (175)	324 (224–359)	0.1 (0–0.7)	77.8 (55.9–85.9)	49	0.0	11.7	49	39
Syrups (61)	279 (4–359)	0.1 (0–0.8)	63.3 (0–87.6)	42	0.0	9.5	40	32
Chocolate spread (78)	545 (260–626)	8.3 (1.4–17)	41.8 (0.6–61)	82	1.2	6.3	26	21
Nut butters (150)	616 (431–688)	7.8 (3.1–20)	6.4 (1.4–38)	92	1.2	1.0	4	3
Nut creams (18)	566 (518–608)	8.6 (4.8–15)	50.5 (44–62.3)	85	1.3	7.6	32	25
Yeast extract (9)	232 (174–271)	0.2 (0.1–0.5)	1.2 (0–4.9)	9	0.0	0.0	0	0
Other (42)	449 (304–607)	4.9 (0–15)	53.2 (0–85.9)	67	0.7	8.0	33	27

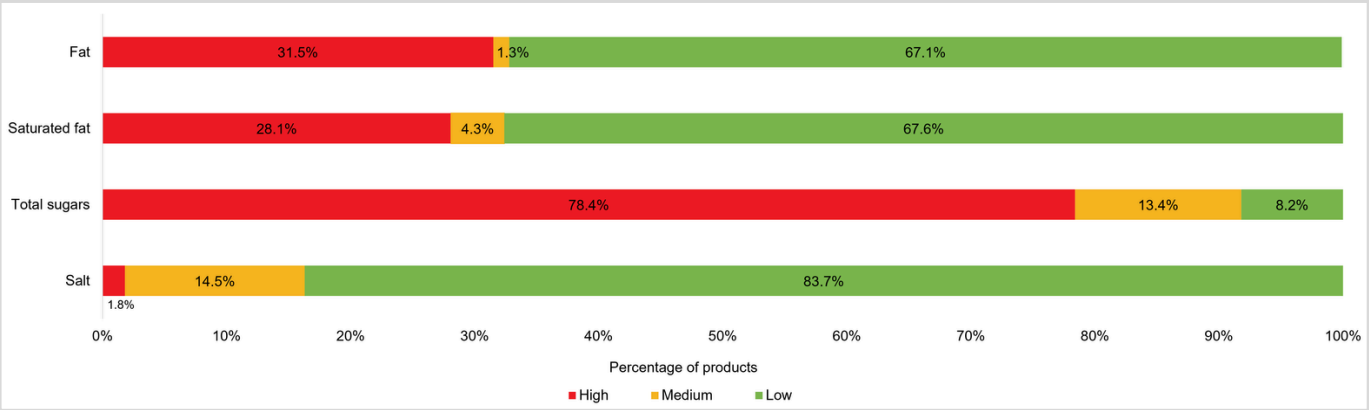
*A standardised serving size of 15g was used for all categories except yeast extracts, for which a 4g serving was used.
**Compares total sugars in the standardised serving with the maximum recommended daily free sugars amount of 24g for children aged 7 to 10 and 30g for adults.
*** Not applicable, as standardised serving sizes differed between categories.

COMPARISON WITH FRONT-OF-PACK COLOUR CODED LABELLING CRITERIA

The UK's front-of-pack (FoP) nutrition labelling system uses colour coding to indicate whether a food contains low, medium or high levels of fat, saturated fat, total sugars and salt. Although nutrition information on the back of pre-packed foods is mandatory, FoP colour-coded labelling remains voluntary [7].

When these criteria were applied, 32% of spreads were classified as high in fat, 28% high in saturated fat, 78% high in total sugars and 2% high in salt. Only 8% were classified as low in total sugars (Figure 1).

Figure 1. Proportion of all spreads classified as low, medium or high in fat, saturated fat, total sugars and salt



The nutrients of concern differed by spread type. Almost all honey (100%), jams and fruit spreads (98%) and syrups (97%) were high in sugars. Chocolate spreads and nut creams were high in several nutrients: 96% of chocolate spreads were high in fat, 91% in saturated fat and 86% in sugars, while all nut creams were high in fat and sugars and 83% were high in saturated fat. Fewer than 1% of nut butters were high in sugars, but almost all (99%) were high in fat and 83% were high in saturated fat (Table 2).

Table 2. Proportion of products classified as high in nutrients of concern, by spread category

Category	High in fat (%)	High in saturated fat (%)	High in total sugars (%)	High in salt (%)
Jams and fruit spreads	0	1	98	0
Honey	0	0	100	2
Syrups	0	0	97	2
Chocolate spreads	96	91	86	0
Nut butters	99	83	1	1
Nut creams	100	83	100	0
Yeast extracts	0	0	0	100
Other spreads	50	52	95	2

COMPLIANCE WITH GOVERNMENT GUIDELINES

The nutritional composition of spreads was also assessed against two government policy frameworks: the Nutrient Profiling Model (NPM), which is used to identify less healthy foods for advertising and promotion restrictions, and the voluntary sugar reduction programme, which set category-specific sugar reduction guidelines for selected sweet spreads.

NUTRIENT PROFILING MODEL

The NPM is used to identify foods high in fat, salt and sugar (HFSS) for relevant advertising and promotion restrictions. It balances nutrients to limit against more favourable components such as fruit, vegetables and nuts, fibre and protein, and foods scoring 4 or more points are classified as HFSS [8]. The restrictions apply only to specified food and drink categories, and spreads, including chocolate spreads, are currently outside their scope [9].

In this survey, 86% of spreads were classified as HFSS under the current 2004/05 NPM. This varied between categories. All honey, nut creams and yeast extracts were HFSS, alongside 99% of chocolate spreads, 97% of syrups and 94% of jams and fruit spreads, compared with 36% of nut butters. Despite this, none of these products fall within the scope of HFSS advertising and promotion restrictions.

The recently updated 2018 NPM, published in January 2026, reflects changes in UK dietary recommendations, including a greater emphasis on free sugars and fibre, but is not yet applied to policy [10]. Under the 2018 model, an estimated 83% of spreads were classified as HFSS. Although the overall proportion changed only modestly, nut butters showed a larger difference, falling from 36% under the 2004/05 model to 11% under the 2018 model. For most sweet spread categories, the proportion remained high under both models (Figure 2).

Figure 2. Proportion of spreads classified as HFSS under the 2004/05 and 2018 NPM



SUGAR REDUCTION GUIDELINES

As part of the sugar reduction programme, category-specific sugar guidelines were set for chocolate spreads (43.8g/100g), peanut butter (3.9g/100g), and fruit spreads (34.6g/100g). Honey, syrups and products covered by preserves legislation were excluded from the programme [3].

Products were compared with the most relevant guideline where one could be identified. Of the 834 products surveyed, 451 were included in this comparison, and 84% of these exceeded the applicable guideline. This included 91% of jams and fruit spreads, 93% of nut butters and 60% of chocolate spreads.

PRICE AND SUGARS CONTENT

Products were categorised as value, standard or premium based on their price and own brand positioning. Overall, premium products had the highest average sugars content at 60.1g/100g, compared with 51.5g/100g for value products and 45.8g/100g for standard products (Table 3). Premium products were also the most likely to be classified as HFSS, at 97% under the 2004/05 NPM and 98% under the 2018 model (Table 3).

A higher price therefore does not indicate better nutritional quality. Consumers cannot rely on price or premium branding to identify lower-sugar options, which highlights the importance of clear and consistent nutrition labelling.



Table 3. Sugars content, nutritional classification and price by product range

Range (no. of products)	Mean sugars (g/100g)	High in sugars (%)	NOVA 4 (%)	Less healthy, NPM 2004/05 (%)	Less healthy, NPM 2018 (%)	Mean price (£/100g)
Premium (216)	60.1	96	56	97	98	£2.18
Standard (586)	45.8	72	51	82	77	£1.42
Value (32)	51.5	78	56	81	78	£0.26

PRODUCT EXAMPLES

The sugars content varied considerably within individual spread categories. Tables 4 and 5 provide examples of products with relatively higher and lower total sugars content, illustrating the differences between products within the same category. Energy and sugars content are presented per 100g and per standardised serving to facilitate comparison.

Table 4. Examples of different types of spreads and syrups with higher total sugars content (per 100g)

Category	Energy (kcal) per 100g	Sugars per 100g	Energy per standardised serving*	Sugars per standardised serving*
Chocolate spread				
M&S Whipped Chocolate Spread	554	61.0	83	9.2
Hazella Choco Swirl Spread	566	59	85	8.9
Nutella Hazelnut Spread with Cocoa	539	56.3	80	8.4
Honey				
Lidl Deluxe Manuka Honey MGO 100+	350	85.9	53	12.9
M&S Collection New Zealand Manuka 100MGO Honey	348	85.9	52	12.9
Rowse Authentic Manuka New Zealand Honey 100+ MGO	348	85.9	52	12.9
Marmalades				
Daylesford Organic Seville Orange Marmalade	283	70.7	42	10.6
Radnor Preserves Smoky Campfire Marmalade**	279	69.0	42	10.4
Stokes Seville Orange Marmalade No 7	278	68.0	42	10.2
Nut butters				
M&S PB & J Spread	431	38.0	65	5.7
Bonne Maman Peanut Smooth Spread	604	20.0	91	3.0
Bonne Maman Sweet & Crunchy Peanut Spread	613	18	92	2.7

Nut creams				
Aldi Specially Selected Pistachio Crème	536	62.3	80	9.3
No.1 Waitrose Hazelnut Crème	558	58.9	84	8.8
ASDA Hazelnut Praline Spread	580	55.0	87	8.3
Syrups				
Morrisons The Best Pure Canadian Maple Syrup	359	87.6	54	13.1
Lidl Deluxe Canadian Maple Syrup Grade A Dark Robust	348	82.0	52	12.3
Lyle's Golden Syrup	317	79	48	11.9

* All calculations use 15g standardised servings, including syrups
**The suggested serving/portion on pack was 5g, so per serving sugars content would be lower compared to one standardised serving (15g)

Table 5. Examples of different types spreads and syrups with lower total sugars content (per 100g)

Category	Energy (kcal) per 100g	Sugars per 100g	Energy per standardised serving*	Sugars per standardised serving*
Chocolate spread				
JimJams Vegan No Added Sugar Hazelnut Chocolate Spread	517	0.6	78	0.1
M&S High Protein Chocolate Hazelnut Spread	593	1.6	89	0.2
CarbZone LowCarb Belgian Hazelnut Spread	468	3.5	70	0.5
Honey				
The Greek Kitchen Pine Tree Honey	224	55.9	34	8.4
Odysea Greek Pine & Fir Tree Raw Honey	331	58.0	50	8.7
Berringa 60MGO Easy Pour Manuka Honey**	329	60.7	49	9.1
Marmalades				
Stute No Sugar Added Fine Cut Orange Marmalade	153	2.5	23	0.4
Wilkin & Sons Ltd Tiptree Reduced Sugar Marmalade Orange	159	37	24	5.6
Streamline Less Sugar Thick Cut Orange Marmalade	164	39	25	5.8

Nut butters				
Biona Organic Pumpkin Seed Butter	593	1.4	89	0.2
SUNFLY Sunflower Seed Butter, Natural Taste, No added sugar Spread	664	1.7	100	0.3
Meridian Protein Smooth Peanut Butter 100%	664	2.1	100	0.3
Nut creams				
Black Milk Pistachio Cream	600	44.1	90	6.6
Black Milk Hazelnut Cream	608	44.0	91	6.6
Rhythm 108 Creamy Pistachio Spread	552	45.0	83	6.8
Syrups				
The Skinny Food Co. Zero Calorie Golden Syrup	4	0.0	1	0.0
The Skinny Food Co. Zero Calorie Maple Syrup	4.0	0.0	1	0.0
Maple Crest Pancake Syrup	274	44	41	6.6

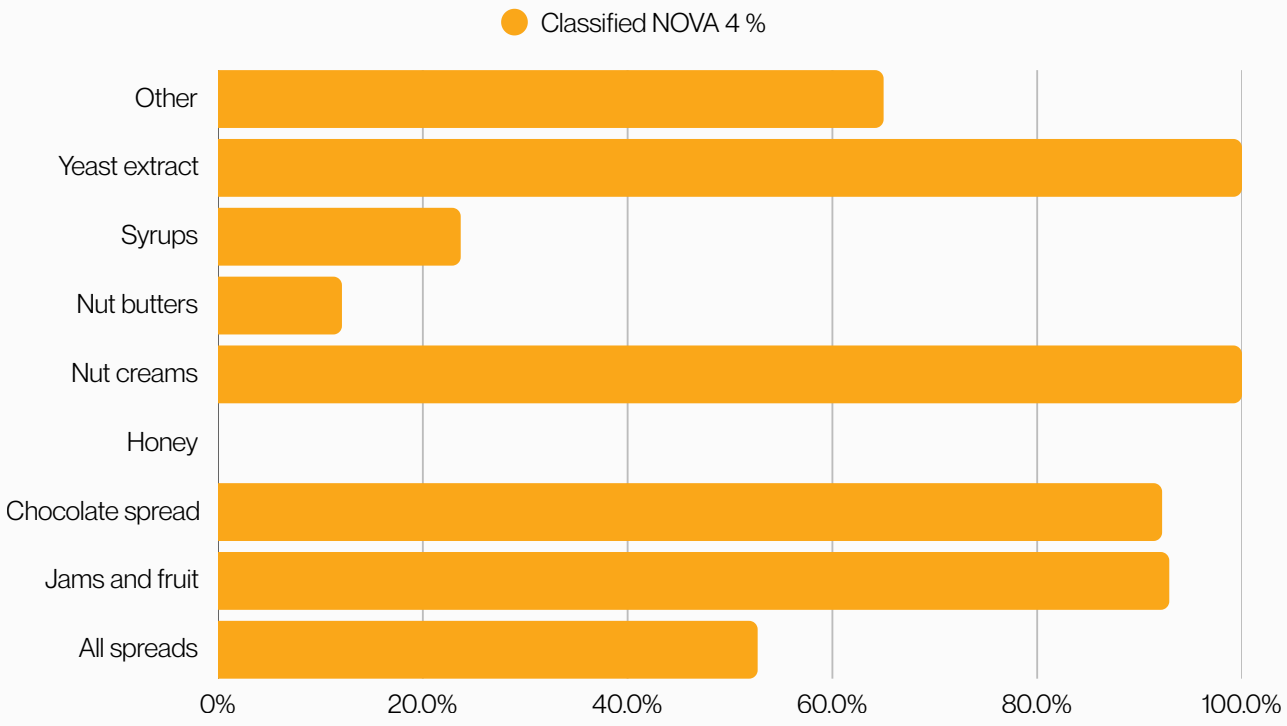
*All calculations use 15g standardised servings, including syrups
** The suggested serving/portion on pack was 5g, so per serving sugars content would be lower compared to one standardised serving (15g)

PROCESSING CLASSIFICATION

Over half (53%) of spreads were classified as ultra-processed (NOVA 4), although this varied between categories. Almost all jams and fruit spreads (93%) and chocolate spreads (92%) were ultra-processed, as were all nut creams and yeast extracts. In contrast, none of the honey products was ultra-processed; only 12% of nut butters and 23% of syrups were ultra-processed (Figure 3).

Processing level and nutritional quality did not always align. Honey and syrups were mostly not ultra-processed, yet almost all were high in sugars. Conversely, some less processed products, such as nut butters with no added sugar or salt, were among the healthiest in the survey. Nutritional composition and level of processing should therefore be considered together.

Figure 3. Proportion of products classified as ultra-processed (NOVA 4), overall and by spread category.



INDUSTRY PERSPECTIVES

All companies with five or more products in the survey, and those mentioned in the press release, were contacted to verify the nutritional information collected and invited to share their perspectives and experiences. Where appropriate, corrections to nutritional information were incorporated into the final dataset.

CHALLENGES IN TRADITIONAL JAMS AND MARMALADES

Jams and marmalades are also subject to specific compositional and labelling requirements. In England, 'jam' and 'marmalade' are reserved descriptions under the Jam and Similar Products (England) Regulations 2003 [6], which set minimum fruit content and, with some exceptions (e.g. reduced-sugar products or those using permitted sweeteners), a minimum soluble solids (largely sugars) content of 60%. They also set specific labelling requirements for fruit and sugar content.

Several manufacturers highlighted the role of sugar in the safety and preservation of traditional jams and preserves, and the challenges this poses for sugar reduction. They noted that traditional production methods combined with additional preservation methods allow companies not to use artificial preservatives or additives found in some reduced-sugar alternatives. One manufacturer reported producing its jams to a minimum Brix level of 60 to achieve the required shelf life.

One marmalade manufacturer highlighted differences in fruit content and production methods between products, which are not captured by comparisons of total sugars alone. Similarly, another manufacturer, which reported that, in September 2026, after the data collection period for this survey, it increased the fruit content of its Strawberry Jam, while total sugars content remained unchanged.

One manufacturer also highlighted the difficulty of reducing the naturally occurring sugars in honey through conventional reformulation.

LOWER-SUGAR ALTERNATIVES

One manufacturer described reducing sugars through alternative products and their use in recipes, reporting that it works with catering teams in education, healthcare and care homes to encourage the use of its no-added-sugar chocolate spreads in desserts and snacks in place of conventional chocolate spreads.

INDUSTRY STATEMENTS

A spokesperson for Ferrero said:
“For Nutella, one portion is a 15g heaped teaspoon, which is 80 kcal. We show a clear visualisation of this recommended 15g portion on pack and across our campaigns, and 70% of consumers say the portion recommendation icon is a good way to educate people on the Nutella portion size (Toluna, N=499, September 2026). Alongside clear portion guidance, we also believe in giving consumers choice. Last year, we extended our range with Nutella Plant-Based offering another option.”
Industry statements”.

A marmalade producer said:
"Our speciality marmalades are created for adult consumers, using carefully selected quality ingredients without the use of artificial preservatives, sweeteners or colourings. Traditional marmalade production is subject to extremely specific compositional laws, with sugar playing a vital functional role in preservation, consistency and shelf life, and as such should be assessed within the appropriate context, recognising the differences in premium ingredients, artisanal production methods and intended consumption."

RECOMMENDATIONS

This analysis of 834 spreads found that the vast majority were classified as HFSS under the Government's current NPM. Despite this, spreads remain outside HFSS advertising and promotion restrictions, highlighting an important gap in the current regulatory framework.

Action on Salt and Sugar is therefore calling for stronger action to improve the nutritional quality of spreads and make healthier choices easier for consumers. The Government must:

EXTEND ADVERTISING AND PROMOTION RESTRICTIONS

Spreads are not covered by current advertising and promotions restrictions, despite the majority being classified as less healthy. Including them and other HFSS products would ensure that products with similar nutritional profiles are treated consistently.

APPLY THE UPDATED NPM TO EXISTING AND FUTURE POLICIES

UK food policy still uses the 2004/05 model, rather than the 2018 model that reflects updated dietary recommendations. Most spreads remained 'less healthy' under both models, so updating it would not weaken action on spreads.

STRENGTHEN TRANSPARENCY THROUGH HEALTHIER FOOD TARGETS AND REPORTING

Mandatory reporting on the healthiness of food sales, committed by Government in the 10-Year Health Plan, would create accountability and allow government to track progress. It would also encourage companies to reformulate products and increase sales of healthier alternatives.

IMPROVE AND MANDATE FRONT-OF-PACK NUTRITION LABELLING

To help consumers make informed choices and encourage healthier product reformulation.



ANNEX

METHODOLOGY

We surveyed spread products available for purchase across major retailers in England between June and August 2026. Products were collected from major UK retailers (Aldi, Asda, Iceland, Lidl, Marks & Spencer (via Ocado), Morrisons, Sainsbury's, Tesco, The Co-operative and Waitrose) using a combination of online and in-store data collection, representing the largest market share in the UK [11]. Information collected included nutrition information per 100g and per serving, ingredients, pack size and price. Where the same product was available in more than one pack size, only one version was retained unless the formulation differed.

Nutrition information per 100g was used to compare products across spread categories. Where per 100g values were not reported, they were first derived from manufacturer reported per serving information where sufficient information was available. Where neither per 100g nor adequate per-serving information was available, missing values were imputed using nutritionally comparable foods from McCance and Widdowson's Composition of Foods Integrated Dataset (CoFID), matched as closely as possible by product type and composition. Where a nutrient value was reported as "<0.5g", a value of 0.25g was assigned for analysis, while values reported as zero/nil/trace were recorded as 0g.

A total of 834 products were included in the final analysis. Retailers and manufacturers with five or more products were contacted in October 2026 for data verification and comment.

INCLUSION AND EXCLUSION

Table 1a. Inclusion and exclusion criteria

Inclusion
• Chocolate spread sub-category: Includes chocolate hazelnut spreads, chocolate peanut butter, milk chocolate spreads, confectionery branded chocolate and biscuit spreads • Nut butters sub-category: Includes peanut butter with added and no added sugar and flavoured peanut butter as well as all other nut butters (e.g. almond, cashew) and seed butters, with or without added sugar • Jams and fruit sub-category: jams, preserves, conserves, marmalade • Honey sub-category: pure honey • Syrups sub-category: maple, golden, agave • Yeast extract sub-category • Nut creams sub-category: including pistachio cream and Hazelnut Crème • Other: fruit spread, sweet spread, chocolate spread with over 50% biscuits/cookies
Exclusion
• Dessert toppings/sauces: Includes dessert syrups with added sugar, coulis, compotes, cream-based toppings, brandy sauce, whether served separately or as part of a composite dish • Honey with added ingredients • Sauces like caramel sauce

DATA ANALYSIS

The nutritional composition of products was analysed overall and by spread sub-category. Analyses included nutrient content per 100g, nutrient content per standardised serving, UK front-of-pack nutrition labelling classifications [7], degree of processing [12], Nutrient Profiling Model classifications [8, 10], comparison with applicable sugar reduction guidelines, contribution to daily nutrient recommendations, price and product-level examples.

STANDARDISED SERVING SIZES

To allow comparison of nutrient intake per serving, a standardised serving size was assigned to each spread sub-category based on the most commonly reported manufacturer serving size / modal serving size observed in the dataset. All spreads had a standard 15g suggested serving size, except yeast extract which had 4g. Nutrient content per standardised serving was calculated from the nutrient information reported per 100g.

Sugar content was compared with the maximum recommended free sugar intake of 24g/day for children aged 7 to 10 years and 30g/day for adults. As nutrition labels report total sugars rather than free sugars, these comparisons are expressed as equivalent proportions of the free sugar recommendation and should not be interpreted as direct measures of free sugars intake.

FRONT-OF-PACK NUTRITION LABELLING

Products were classified as low, medium or high in total fat, saturated fat, total sugars and salt according to UK front-of-pack colour-coded nutrition labelling criteria [7].

Classifications were based on nutritional information per 100g rather than whether products displayed front-of-pack labels. The proportions classified as low, medium and high were calculated overall and by spread category

Table 1b. UK colour-coded criteria for 100g of food

Nutrient	Low	Medium	High
Fat	≤3.0g/100g	>3.0 to ≤17.5g/100g	>17.5g/100g
Saturated fat	≤1.5g/100g	>1.5 to ≤5.0g/100g	>5.0g/100g
Sugars	≤5.0g/100g	>5.0 to ≤22.5g/100g	>22.5g/100g
Salt	≤0.3g/100g	>0.3 to ≤1.5g/100g	>1.5g/100g

NUTRIENT PROFILING MODELS

The nutritional quality of each product was assessed using both the 2004/05 NPM and the updated 2018 NPM [8, 10].

Free sugars were estimated using available nutritional information and ingredient lists, with reference to the 2018 NPM guidance. Fruit, vegetable and nut content and the resulting NPM scores were calculated by one researcher. A second researcher independently checked a random 20% sample of the FVN estimates and both the 2004/05 and 2018 NPM scores. No discrepancies were identified.

PRICE ANALYSIS

Value products were retailers' entry-level own-label ranges (Asda Just Essentials, Morrisons Savers etc.). Premium products were retailers' premium own-label ranges (e.g. Tesco Finest, M&S Collection, Sainsbury's Signature, Lidl Deluxe etc.) and higher-priced specialist brands. Standard products included retailers' main own-label ranges and mainstream manufacturer brands.

Price per 100g was calculated using the product price and pack weight. Products were then classified as value, standard or premium based on a combination of their price and brand or product positioning within the retail market. As price ranges and brand positioning vary between retailers and product categories, classification was based on both factors rather than a single fixed price threshold.

Initial classification was undertaken by one researcher using product price alongside brand information as contextual indicators. A second researcher independently checked a random 20% sample of the classifications. Any differences in classification were discussed between the researchers and resolved by consensus.

Mean price and nutritional characteristics were compared across the three price groups, including mean sugar content, the proportion classified as high in sugars, the proportion classified as NOVA 4, and the proportion classified as 'less healthy' under the 2004/05 and 2018 Nutrient Profiling Models.

CLASSIFICATION OF ULTRA-PROCESSED FOODS

Products were classified according to the NOVA food processing classification using the ingredient information available for each product [12].

Products were assigned to NOVA groups 1 to 4 according to the nature and purpose of processing and the presence of ingredients associated with industrial food formulation. Products classified as NOVA 4 were considered ultra-processed foods.

NOVA classification was conducted using research group predefined criteria. Table 1c shows classification criteria. 20% of all products were double checked by another independent researcher.

Table 1c. NOVA classification criteria

Classification	Criteria
NOVA 1	Unprocessed or minimally processed foods. Examples in this dataset include 100% nut/seed butters with no added culinary ingredients.
NOVA 2	Processed culinary ingredients derived from foods/nature and used in cooking, e.g. honey, maple syrup, agave syrup.
NOVA 3	Group 1 foods combined with Group 2 culinary ingredients such as sugar, salt or oil, without NOVA 4 markers.
NOVA 4	Industrial formulations containing food substances rarely used in kitchens or cosmetic additives. Some artificial ingredients also used as markers: Flavourings, colours, emulsifiers, sweeteners, maltodextrin, dextrose, glucose-fructose/glucose syrup, invert sugar, modified starch, isolated/modified proteins, lactose, hydrogenated/interesterified fats, humectants, gelling/thickening agents including pectin, flavour enhancers, and fruit juice concentrates.

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ABOUT ACTION ON SALT & SUGAR

Action on Salt & Sugar is a registered UK charity (1098818) based at Queen Mary University of London, working to improve population health and food environments through impactful research on the nutritional content of food and drink. We inform policy, influence the food industry, raise awareness, and build advocacy for salt and sugar reformulation.

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