



A Nutritional Analysis of Sufra NW London Standard Food Parcel

Saadia Noorani RNutr

Nutrisa Ltd

Background

Food banks have seen an increase in demand since the start of the COVID-19 pandemic in 2020, with people requiring their services more often and a new cohort of people reaching out for the support of food banks for the first time. During 2021, use of food banks remained high, especially for younger people, households with children, single households, and ethnic minorities households.

In early 2021, Nutrisa completed a nutritional analysis of Sufra NW London Standard, Easy Eat and Emergency NHS parcels. The findings were presented to Sufra NW London in April 2021.

In response to these findings, Sufra NW London has proposed that a secondary analysis be made with the inclusion of bread bags, fruit and vegetable bags, chicken and eggs.

Methodology

The nutritional content of a standard Sufra NW London food parcel was estimated by taking photographs of the contents of the parcels over a 4-day period.

Only standard parcels packed to feed 1 or 2 persons for 7 days were analysed. In addition, one bread and one fruit and vegetable bag were included in the analysis however additional snacks or donations were not included¹.

Photographs were taken of each item within a standard parcel, bread bag and fruit and vegetable bag after it was prepared by volunteers². The photographs were used to select product matches³ and analysed using the McCance and Widdowson's Composition of Foods Integrated Dataset (CoFID)⁴.

The analysis makes the assumption that all food items within a parcel were eaten over a 7-day period with the exception of sugar, jam and oil where the assumption is made that 50% of sugar, jam and oil was consumed over a 7-day period for 2 persons and 25% for 1 person. The analysis was conducted to estimate both macronutrient (carbohydrate, protein, fats) and micronutrient content (vitamins and minerals) (where data was available).

Additional hypothetical analyses were conducted based on the average standard food parcel (plus bread and fruit and vegetable bags) with the inclusion of 1kg raw chicken and 6 eggs at the request of Sufra NW London. Raw (frozen) chicken and fresh eggs are sometimes offered to users/guests when these items are available/donated.

The parcels were compared with the UK government recommendations known as dietary reference values (DRVs) for healthy adults both females and males aged 19- 64yrs⁵ except for pantothenic acid and vitamin E (where EU guidelines were used as UK Recommended Nutrient Intake (RNI) have not been set). The values for fat, saturated fat, sugars and salt are the recommended upper limits

¹ The standard food parcels are packed according to a standard packing list depending on the number of persons in a household. Bread, fruit and vegetables are packed based on donations received from supermarkets, City Harvest and Felix project. The contents of these bags vary and one bag of bread and one bag of fruit and/or vegetables accompanies each parcel regardless of the number of persons in a household.

² Parcels were selected at random after they were made up by volunteers.

³ Where exact matches were not possible, similar products were selected. Some nutrients were missing for some products.

⁴ <https://www.gov.uk/government/publications/composition-of-foods-integrated-dataset-cofid>

⁵ Does not include pregnant or lactating women.

for intakes. The reference intake (RI) for total sugars were used instead of the DRV for free sugars since it is not possible to distinguish free sugar content from food labels.

The contents of the parcels were also audited against the standard packing list.

Findings

Comparison of food parcels against standard list

The contents of the food parcels were compared against the standard packing list provided by Sufra NW London. Our findings show that with the exception of coffee and juice, all selected food parcels met or exceeded the quantity of each item as specified on the standard packing list.

Table 1: Contents of packed standard parcels compared to the standard list of 1-2 persons

Item	Quantity				
	Standard	Day 1	Day 2	Day 3	Day 4
Cereal/oats	1	1	1	1	1
Biscuits/crackers	1	1	1	1	2
Tea	1	1	1	1	1
Coffee	1	0	0	0	0
Sugar/sweetener	1	1	1	1	1
Milk (1 litre)	1	1	1	1	1
Rice	1	1	1	1	1
Pasta	1	1	1	1	1
Pasta /cooking sauce	1	1	1	2	1
Tinned vegetables	3	4	4	4	4
Chickpeas/kidney beans	1	2	2	2	1
Baked beans/hoops	1	2	2	2	2
Soup	2	2	2	2	2
Tinned tomatoes	1	1	1	1	1
Cooking oil	1	1	1	1	1
Snacks	Dependent on stock	0	0	0	0
Tinned fish	1	1	1	1	1
Jam	1	1	1	0	1
Tinned fruit /custard	1	1	1	1	1
Instant noodles	1	1	1	1	2
Juice	1	0	0	0	0

Figure 1: Contents of one standard food parcel (for 1-2 persons).



Example of Day 4 collection

Figure 2: Contents of fruit/ vegetable bag & bread bag.



Nutritional Analysis

Nutrient content of standard parcel (plus bread and fruit and veg bags) for 1 adult

Our analysis show that the parcel contents met the nutrient requirements for energy, protein, fibre, all minerals (with the exception of iodine) and all vitamins (with the exception of vitamin D) for adults when compared with the UK DRVs (figure 3, 4, 5) on the assumption that the parcel was for one adult.

The contents of the parcel contain acceptable levels of fats but contained high levels of sugar at 138g per day which far exceed the UK recommended upper limits (this is despite assuming a conservative 25% consumption from table sugar and jam). The main source of sugar contributing to high levels were from table sugar, breakfast cereals, biscuits, and jams/marmalade.

Inclusion of chicken and eggs

The hypothetical analysis of an average food parcel with the inclusion of chicken and eggs increased the iodine content of parcels from 35mcg to 52mcg per day but would still not meet the nutrient requirements for iodine.

The vitamin D content of the parcels remained low as it is difficult to meet vitamin D requirements through food alone.

Figure 3: Comparison of food parcel with UK Government recommendations for macronutrients for healthy adults aged 19-64 yrs

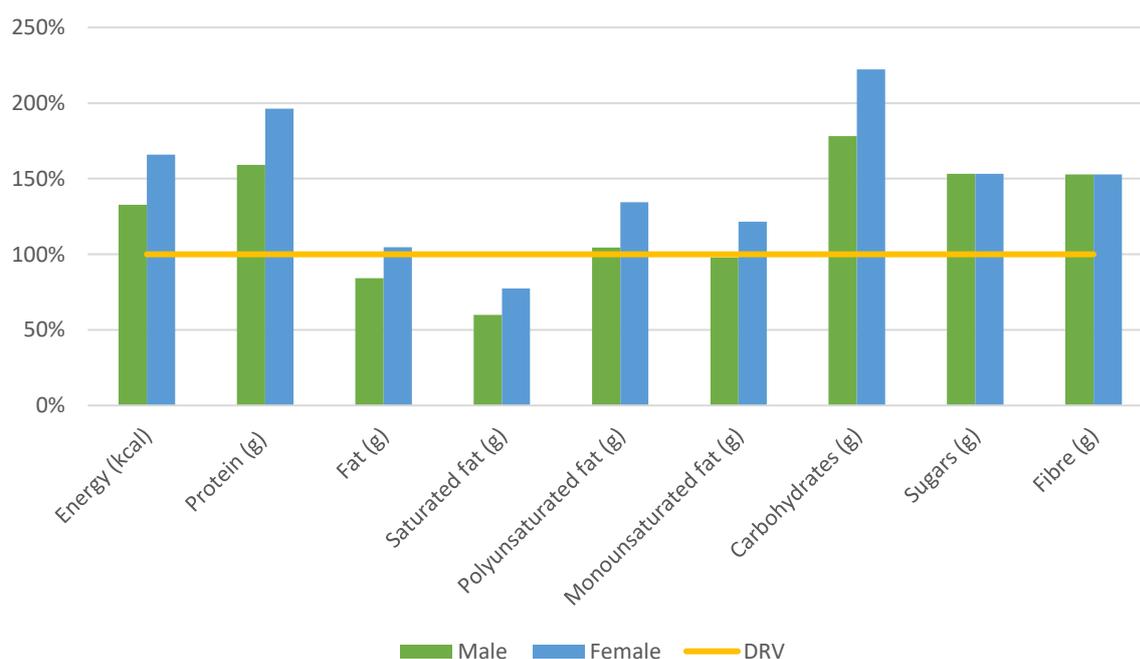


Figure 4: Comparison of food parcel with UK Government recommendation for vitamins for healthy adults aged 19-64 yrs

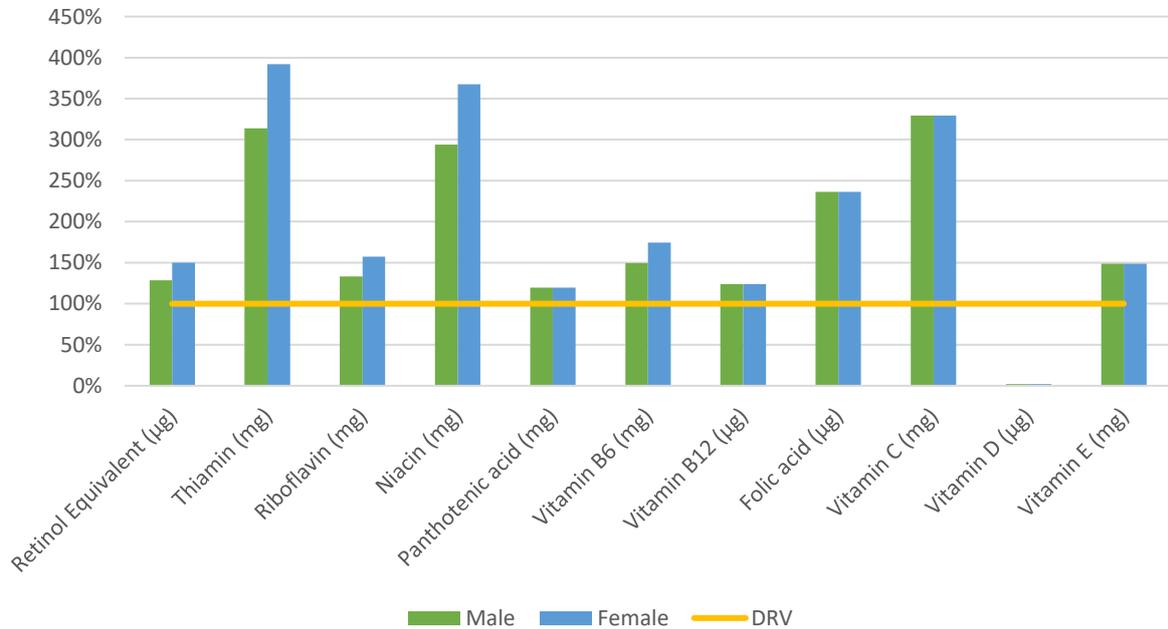
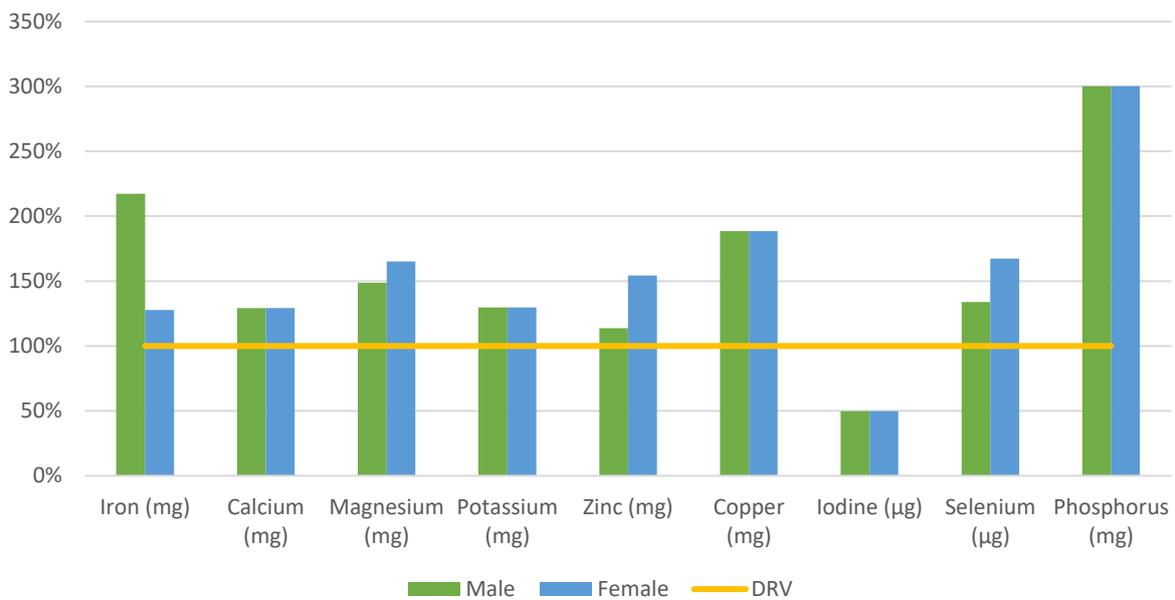


Figure 5: Comparison of food parcel with UK Government recommendation for minerals for healthy adults aged 19-64 yrs



Nutrient content (plus bread and fruit and veg bags) for 2 adults

When analysing the same parcels for nutritional adequacy based on two adults, our findings show that the parcel content did not meet the nutrient requirements for energy (calories), protein, or fibre (figure 6), the majority of minerals particularly iron (for women only), calcium, magnesium, zinc, iodine selenium and vitamin A, riboflavin, pantothenic acid, vitamin B6, vitamin B12 and vitamin D (figure 7 & 8).

The calorie content per day would be just about enough to meet the average energy needs for women but would be below the energy needs for men. The fibre content of 23g per day, while below the recommended 30g per day, is still above the average UK diet pre-lockdown⁶ The sugar content of 91g per day would be a little above the UK recommended upper limit⁷.

Inclusion of chicken and eggs

The hypothetical analysis of an average food parcel with the inclusion of chicken and eggs would increase the calorie content to 2011kcal per day but would still be below the energy needs for men. The protein content would increase to 63g per day exceeding the protein requirement for both women and men. The fibre content would not change and would remain below the UK recommendation. The overall vitamin and mineral content of the parcel would increase with the exception of vitamin A, vitamin D, iron (for women), calcium, potassium, magnesium, zinc & selenium (for men), iodine which did not meet the nutritional requirements for adults.

⁶ Food Standards Agency and Public Health England. NDNS: results from years 7-8 combined. 2018. <https://www.gov.uk/government/statistics/ndns-results-from-years-7-and-8-combined>

⁷Assumption is made that 50% of sugar and jam and oil was consumed over a 7-day period for 2 persons.

Figure 6: Comparison of average food parcel (based on 2 adults) with UK Government recommendations for macronutrients for healthy adults aged 19-64 yrs

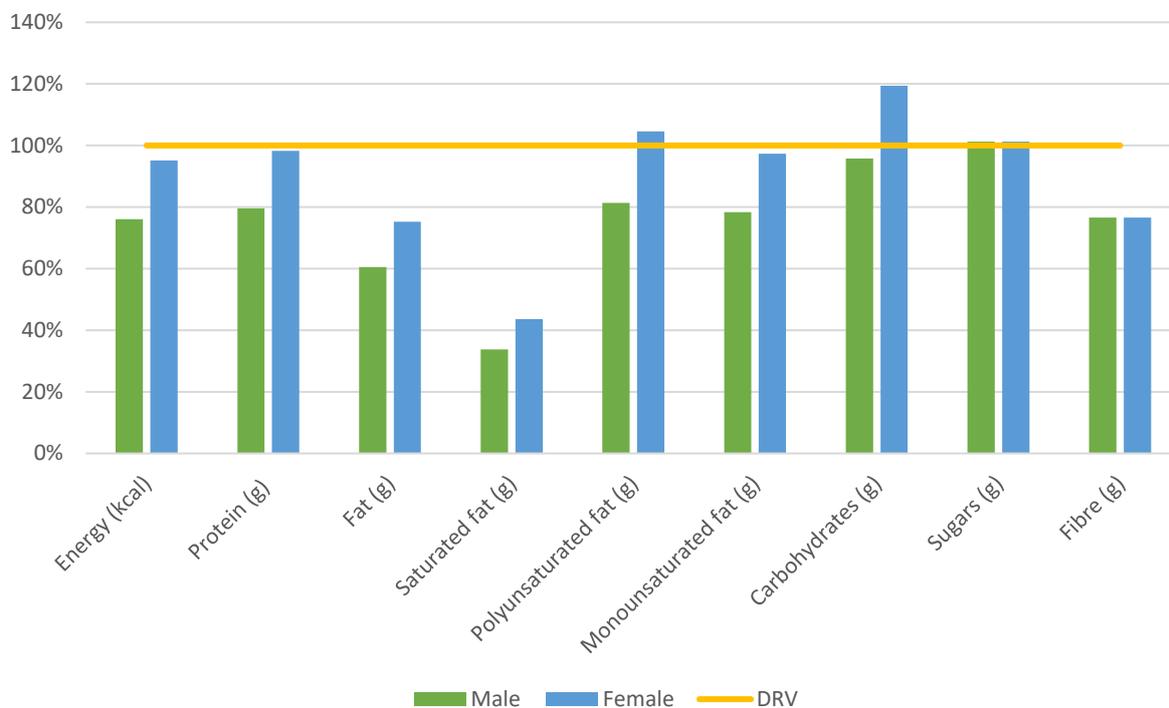


Figure 7: Comparison of food parcel (based on 2 adults) with UK Government recommendation for minerals for healthy adults aged 19-64 yrs

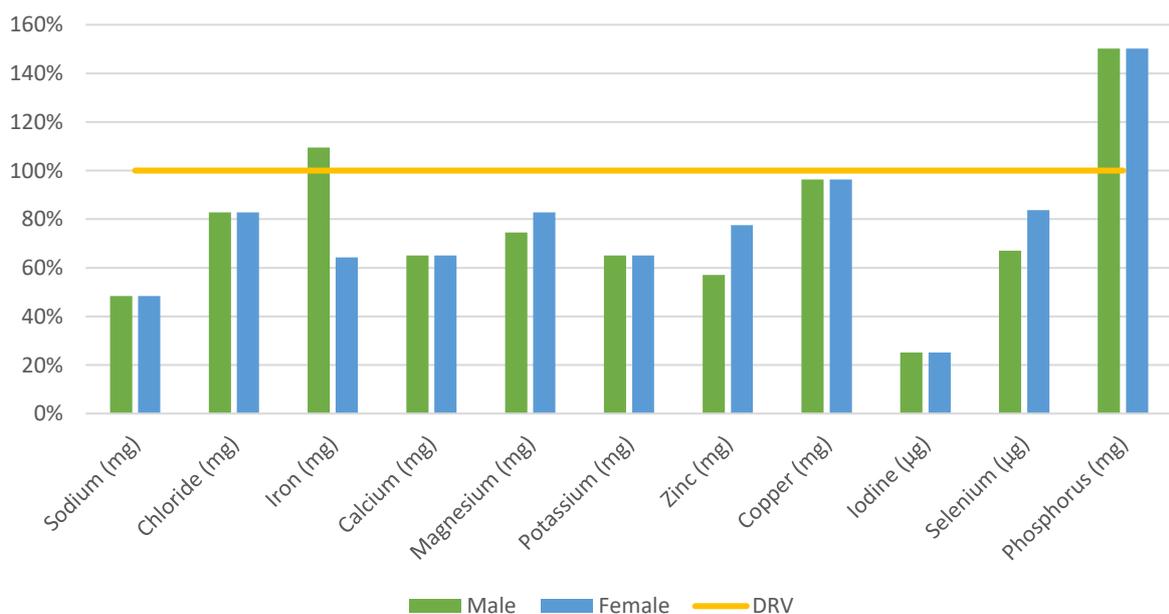
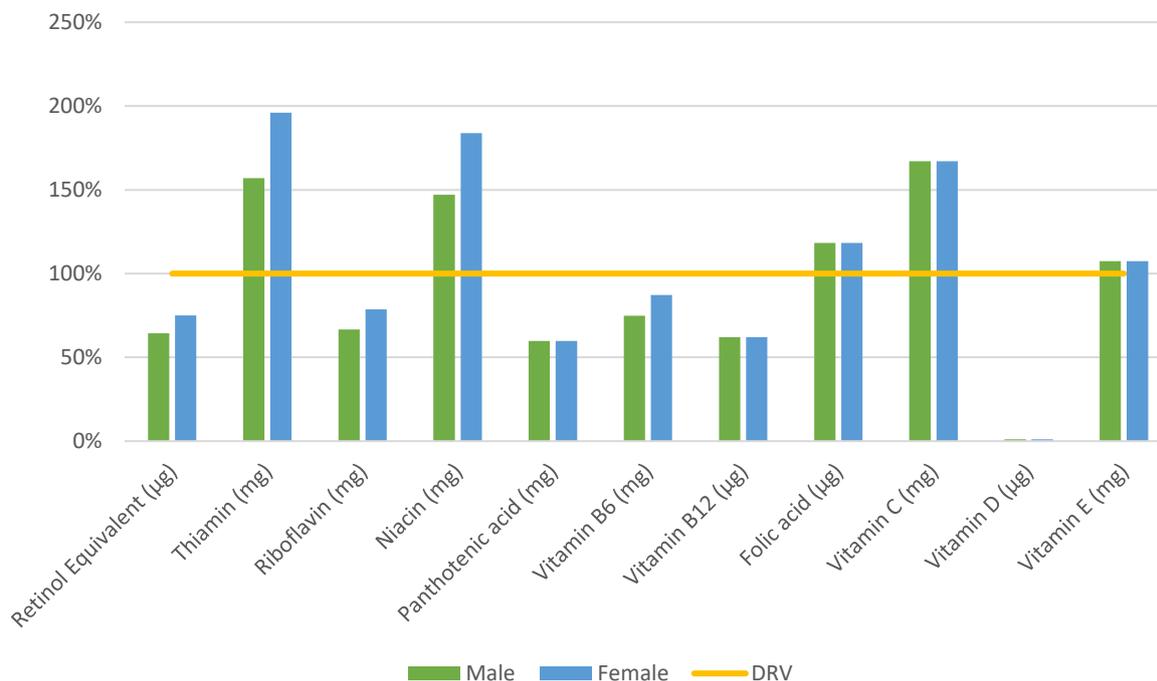


Figure 8: Comparison of food parcel (based on 2 adults) with UK Government recommendation for vitamins for healthy adults aged 19-64 yrs



Conclusion

The standard parcels met the energy and nutrient requirements for a single adult over 7 days with the exception of micronutrients iodine and vitamin D. The addition of chicken and eggs increased the overall nutrient content of the parcel but did not increase the iodine content enough to meet the nutritional requirements for an adult. The parcel contains high amounts of sugar in excess of the UK recommended upper limit.

The standard parcels did not meet the energy and nutrient requirements for two adults over 7 days. The addition of chicken and eggs to the parcel would increase the protein content to meet the requirements for adults and although it would meet the energy requirements for women it would not meet the energy requirements for men. The vast majority of minerals and some key vitamins were also not met.

Recommendations

1. Our findings highlight the need to reduce the free sugar content of parcels whilst maintaining the overall nutritional quality of the parcels. Consideration should be given to removing the sugar bags and offering these as self-serves, swapping breakfast cereals for low sugar fortified varieties, replacing jams with lower sugar varieties or nut butters (no added sugar varieties) and swapping biscuits for plain varieties which tend to be lower in sugar⁸.
2. To help increase the iodine content of the parcels, consideration should be given to include milk/dairy products and fish which are rich sources of iodine. Possible food options include larger quantity of milk and/or fish and plain yoghurts.
3. To help increase the iron, magnesium, zinc and calcium content of the parcels, consideration should be given to include meat products, lentils and nuts/seeds which are good sources of these nutrients. Possible food sources include tinned sardines, wholemeal bread, hummus, tahini paste, tinned lentils, cashew nuts, cheese and yoghurt.
4. The parcel size was not adequate for meeting the nutritional requirements for two adults therefore it is recommended to undertake a re-assessment of the parcel size and contents.
5. The main source of fibre was from fresh fruit and vegetables. To help increase the fibre content of the parcel when fruit and vegetables are not available it is recommended to swap the white pasta, rice and bread for wholemeal varieties.
6. It is difficult for most people to get enough vitamin D through food alone as the main source of vitamin D is through sunlight. The UK government recommends everyone should consider taking a daily supplement during autumn and winter and all year round for those with dark skin (African,

⁸ Based on McVities's top 20 selling biscuits, we found that McVitie's Original Digestives had the lowest free sugar content at 15.1g/100g. Ref: <https://www.unitedbiscuits.com/index.html#>

Africa Caribbean or south Asian background)⁹. Some families are eligible for free vitamin supplements through the UK government Healthy Start Scheme. It is recommended to raise awareness of the free Healthy Start vitamins amongst eligible users/guests.

⁹ <https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-d/>

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Nutrifa Ltd 2022

Email: hello@nutrifa.co.uk