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Abstract

## Meeting UK Fibre Intake Recommendations in Food Insecure Households: The Availability of Fibre from Redistributed Surplus Food <sup>†</sup>

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Abstract: Background: The majority of UK adults are failing to consume the recommended fibre intake levels. Whilst insufficient fibre intake is shown across the population as a whole, it is particularly deficient in low-income households. The cost-of-living crisis has further exacerbated the prevalence of food insecurity, with an increasing number of UK households becoming reliant on redistributed food to supplement their diets. The availability of fibre from this redistributed food is unknown. Objectives: To examine the quantities and sources of fibre available to food insecure households via surplus food redistribution. Methods: 12 months of food processed by a UK surplus food charity was examined to quantify the availability of fibre (grams per 2000 kcal) redistributed to food insecure populations in Leeds. These data were also examined to identify seasonal variation in fibre sources, food groups providing most fibre content, and to quantify the number of 'sources of' (SO) and 'high in' (HI) fibre foods as a proportion of total food items redistributed. Results: The recommended portion of 30g of fibre per 2000 calories was available for redistribution for 3 out of 12 months in 2022. However, this was due to the sporadic availability of specific individual high fibre snack items, rather than reflective of the balance of diet commonly available. Frequently received SO/HI fibre foods were not donated in large quantities, required complex cooking, or were not nutritionally balanced. There was no seasonal variation in fibre sources evident. Discussion: Redistribution of surplus food can provide critical support to food insecure households. The nutritional balance of this food is largely dependent on the types of foods available for redistribution, so fluctuations in fibre availability is expected. Whilst insufficient to meet the recommended 30g/day of fibre, the food available for redistribution was sufficient to meet and exceed the levels of fibre commonly consumed in the general population (~20 g/day). Insight into the quantity and types of fibre-rich foods available for redistribution can: (i) inform specific interventions (e.g., recipe ideas) to increase the consumption of these available foods, (ii) help identify which types and sources of fibre are not commonly available and should be prioritised.

Keywords: fibre; surplus food; diet quality; low income households; food poverty



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