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Care home menus in the north east exceed the dietary reference values for total fat, saturated fat and sodium whilst providing insufficient carbohydrate, non-starch polysaccharides, vitamin D and selenium

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Dietary reference values (DRVs) for older adults, aged over 65 years, are aimed at meeting the requirements of healthy individuals⁽¹⁾. The continual annual increase in the number of older people in the UK and throughout the world⁽²⁾ will result in an increased demand for care homes to accommodate those unable to live independently. It is essential to evaluate whether the food provided by these establishments meets the DRVs. Studies have been conducted to assess the nutritional status of individuals within care homes⁽³⁾. However, studies evaluating the overall nutrient provision within these institutions is lacking. Consequently, in the present study, menus from care homes across the north east of England ($n = 14$) were analysed to determine whether the macro- and micro-nutrients provided met the DRVs.

Seven-day menus were provided by each care home and analysed using Microdiet software. In addition, a questionnaire was devised to determine variables such as cooking methods and salt provision at the table and completed by staff at each care home. Mean results for each nutrient were compared to the DRV to determine whether there were any statistically significant differences within and between the care homes.

The table below shows the range of the average daily amounts of selected nutrients across the care homes. All the homes provided significantly higher total fat, saturated fat and sodium and lower carbohydrate, non-starch polysaccharides, vitamin D and selenium. There was no significant difference between the care homes for these variables.

Nutrient	DRV	Range of daily means between care homes	<i>P</i>
Carbohydrate	≥ 47% of total energy	40–45%	0.001
Non-starch polysaccharides	18 g/day	10–13 g/day	0.001
Total fat	33% of total energy	39–43%	0.001
Saturated fat	10% of total energy	14–18%	0.001
Vitamin D	10 µg/day	2–6 µg/day	0.001
Sodium	1600 mg/day	2122–2964 mg/day	0.001
Selenium	75 µg/day males, 60µg/day females	30–48 µg/day	0.001

On a positive note, all care homes met the DRVs for calcium, iron and polyunsaturated fatty acids and provided significantly lower trans fat than the DRV. There was a significant difference for folate ($p = 0.011$) and zinc ($p = 0.001$ for males, $p = 0.026$ for females). However, results varied across the care homes with some care homes significantly exceeding the DRVs and others significantly below.

In conclusion, there was a significant difference between the food supplied across the care homes and the DRVs for the target population. Of particular concern was the excess of saturated fat and sodium and inadequate NSP, vitamin D and selenium. This research highlights the need to increase nutritional awareness within care home staff.

1. Department of Health (1991) *Dietary Reference Values of Food Energy and Nutrients for the United Kingdom (Report on Health and Social Subjects)* HMSO, London, UK.
2. Cohen J (2003) *Science* **302**, 1172–1175.
3. Cunnee S, Jones J, Davidson I *et al.* (2011) *British Journal of Community Nursing* **16**, 22–28.