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## Whole Grain Intake in the United Kingdom Remains Unchanged from 2008/9 to 2018/19 and Well Below Recommended Levels

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Whole grain (WG) consumption has been associated with many health benefits<sup>(1–4)</sup>. However, in the UK, there is a lack of WG intake data with the most recent analysis available spanning the years 2008–2011<sup>(5–7)</sup>. In this study, our aim is to assess the consumption of whole grains among the UK population using data from the National Diet and Nutrition Survey (NDNS) rolling programme covering the years 2008 to 2019.

WG intake trends and sociodemographic patterns from the UK NDNS Rolling Programme, 2008/09 to 2018/19, of 15,655 individuals aged  $\geq 1.5$  years who completed a four-day food diary were analysed. WG consumption was assessed by examining the WG content of foods in grams based on product ingredient information. Survey-weighted mean consumption of whole grains overall and by socio-demographic group and health status variables. Survey-weighted Wald tests (for categorical variables such as ethnicity) and trend tests (for ordered variables such as age group) will be used to determine whether intakes of whole grains differ within category.

No statistically significant trend was observed in total WG intake when comparing the intakes from 2008–2012 to 2016–2019, with mean intakes of 29.2g/day (95% CI: 27.8, 30.5) and 28.2g/day (95% CI: 26.8, 29.6), respectively. In 2016–2019 older adults (65y+) had the highest consumption (33.6 g/day [95% CI: 30.5, 36.8]), followed by 19–64y, with an intake of 29.1 g/day (95% CI: 27.1, 31.2). High-fibre cereals, bread, and other cereals including pasta and rice were the primary sources of WG. Between 2008–2012 and 2016–2019, the mean daily intake of high-fibre cereals and bread significantly declined from 11.1g (10.3, 11.9) to 9.3g (8.5, 10.1) and 12.4g (11.6, 13.1) to 10.0g (9.2, 10.8) respectively. Conversely, consumption of other cereals increased from 4.0g (3.3, 4.7) to 6.9g (6.1, 7.6) per day. Individuals with higher incomes, levels of education and healthy weights showed higher mean WG consumption.

Our study showed no statistically significant change in mean whole grain consumption in the UK from 2008/09 and 2018/19. Although, there is absence of dietary WG recommendations in the UK, whole grain intakes are below the recommended levels proposed by many countries.

### References

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