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Tracking of fruit and vegetable consumption from early- to mid-adolescence: The Gateshead Millennium Study

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The Gateshead Millennium Study (GMS) is a population-based birth cohort⁽¹⁾ with observational data on lifestyles and their determinants, including dietary intake, measured at average ages of 12 and 15 years. Fruit and vegetable consumption of adolescents is known to be limited and was reported at around 3 portions per day in the recent National Diet and Nutrition Survey compared with current UK guidelines of at least ‘5-a-day’^(2,3). The aim of this study was to compare fruit and vegetable consumption in the GMS participants and to determine the degree of tracking from early- to mid-adolescence.

Dietary intake was measured using computer-based self-completion 24-hour recall, called SCRAN24⁽⁴⁾ in 2011–2012 (age 12y) and renamed INTAKE24⁽⁵⁾ in 2014–2015 (age 15y). Participants who completed two records at both follow-ups were included in the analysis. Daily portions of fruit and vegetables consumed were calculated and adherence to UK 5-a-day recommendations assessed. Fruit juice and baked beans were included in the calculation but capped at one portion per day each. Spearman’s rank order correlation was performed to assess tracking.

Data from 203 adolescents (44% boys) were available from both 12y and 15y follow-ups. Fruit and vegetable consumption showed positive tracking (Spearman’s rho = 0.3, p < 0.001). Median daily portions of fruit and vegetables consumed at 12y were similar to those at 15y; 1.6 (IQR 0.9–2.6) compared with 1.4 (IQR 0.8–2.6). Although the number of children who met the 5-a-day target increased from 2.5% to 4.9% the number consuming no fruit or vegetables also increased. There were no children who met the 5-a-day target at both age 12 y and age 15y. The table summarises portions of fruit and vegetables consumed at age 12y and 15y in relation to UK 5-a-day guidelines.

Total participants = 203	Met 5-a-day guidelines	Consumed 0 portions/day
12 years	5 (2.5%)	14 (6.9%)
15 years	10 (4.9%)	24 (11.8%)

This study provides evidence of a degree of tracking of fruit and vegetable consumption from early- to mid-adolescence, but also a small, but not statistically significant, increase in the percentage of those who consumed no fruit and vegetables in the two days recorded. The proportion of young people consuming less than optimal fruit and vegetables remains a cause for concern, and this study suggests that in this population in the north east of England consumption is considerably lower than the average for adolescents in the UK.

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