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Intake of B vitamins in UK dwelling South Asian and White Caucasian women: Results from the D-FINES study

Andrea Darling, Kourosh Ahmadi and Susan Lanham-New
University of Surrey, Guildford, United Kingdom

Abstract
Adequate intakes of the B vitamins are essential for health; however there is a lack of data concerning B vitamin intakes in UK dwelling South Asian (SA) groups. We aimed to investigate whether UK SA women meet the LRNI for B vitamins, and whether their intake differs from same-age White Caucasian (WC) women. We used summer 2006 dietary intake data from the Food Standards Agency (FSA) funded D-FINES study (Vitamin **D**, **F**ood **I**ntake, **N**utrition and **E**xposure to **S**unlight in Southern England, project N05064). After removal of over- and under-reporters (energy: BMR ratio < 1 or > 1.6) there were n = 29 SA and n = 146 WC subjects. The two groups did not differ significantly in age and BMI. Overall mean (SD) for age was 50.6 (13.6) years and for BMI was 26.8 (4.8). In SA, 41% were Bangladeshi or Pakistani, 28% were Indian and 31% were of other ethnicity. Independent T-tests, using log transformed data, showed no statistically significant differences for any B vitamin (Bonferroni revised p value: < 0.008). Results were as follows, giving median (IQR): Thiamine (mg) 1.5 (0.5) SA vs 1.4 (0.5) WC; (P = 0.8); Riboflavin (mg) 1.3 (0.5) SA vs. 1.5 (0.6) WC (P = 0.08); Niacin (mg) 30.7 (13.7) SA vs 33.3 (9.8) WC (P = 0.4); B_6 (mg) 1.7 (0.5) SA vs 1.9 (0.7) WC (P = 0.2); B_{12} (micrograms) 2.8 (0.05) SA vs 3.6 (2.5) WC (P = 0.02); Folate (micrograms) 213 (93) SA vs 231 (82) WC (P = 0.8). In terms of percentages below the LRNI: Thiamine 0% SA and 0.7% (n = 1) WC; Riboflavin 0% SA and 1.4% (n = 2) WC; B_{12} 10% (n = 3) SA and 0% WC. For Niacin, B_6 and Folate no women in either group were below the LRNI. Overall, there were no ethnic differences in B vitamin intake by ethnicity. There was a trend for a slightly lower B_{12} intake in SA but this did not reach statistical significance after adjustment for multiple testing. It is of concern that 10% of SA did not meet the LRNI for B_{12}. Of this 10%, the majority were not vegetarian or vegan. The sample size for SA was very small and further research is now required in a larger sample to confirm this finding. The D-FINES study was funded by the UK FSA (N05064). The views expressed are those of the authors alone.

Conflict of Interest
There is no conflict of interest