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**Abstract
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Trans fatty acids intake in a sample of young university students from Leicester, England

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BACKGROUND AND AIM:To assess intake of trans fatty acids (TFA) in a young population of students at De Montfort University (DMU, UK), after voluntary food product reformulation in 2011.

METHOD:Comprehensive nutrient intake was collected from 111 (20.45 ± 1.16 yrs-old; 78 female) DMU students between 2015-16 from three major ethnic backgrounds (41 Asia, 41 Africa, 27 Europe), using a validated variant of the Nutrition Norfolk Food Frequency Questionnaire. Questionnaires were processed with Nutritics dietary software. BMI values were calculated with the formula BMI = kg/m².

RESULTS:According to their BMI values, 25.7% and 8.3% of this population were overweight and obese, meanwhile 9.2% were underweight. Overweight is three times that of the national average in this age group, 10.6%. The dietary intake of total fat (100.55 vs. 81.72 all in g/day; p-value=0.032) and saturated (SFA; 34.73 vs. 29.84; NS), monounsaturated (MUFA; 37.54 vs. 30.42; p-value=0.042), polyunsaturated fatty acids (PUFA; 14.61 vs. 12.91; NS) and TFA (1.58 vs 1.27; p-value=0.017) was higher in male counterparts, which can explain the significantly higher intake of energy (3064.9 vs. 2310.8 kcal/day; p-value=0.0011) in men. The intake of total-fat (p-value=0.0007), MUFA (p-value=0.0224) and PUFA (p-value=0.0012) were significantly higher in students from Asia and Europe. However, although without significance, the higher intakes of TFA were seen in Asian [values as mean and range (in g/day); 1.435 (0.290-5.047)] and African [1.370 (0.416-3.906)] students versus European [1.232 (0.305-2.815)].

CONCLUSIONS:The dietary intake of total-fat, SFA, MUFA, PUFA and TFA were slightly higher than those reported in general English population (19-64 years-old). Moreover, some DMU students shown to have diets with intake of TFA above the WHO TFA limit (2.2 g/day for a 2000-calorie diet), which could place them at increased health risk, highlighting the need of public health interventions that promote healthy diets in these population groups.

Keywords: TFA intake, fat, university students, overweight, Leicester.