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**Abstract
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Biomonitoring mercury in young students attending a British university

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BACKGROUND AND AIM: Hair mercury (Hg) levels are considered a good biomarker of exposure to this pollutant. To evaluate the exposure to Hg in undergraduate De Montfort University (DMU) students. **METHOD:** Nutrient intake was collected from 111 (20.45 ± 1.16 yrs-old; 33 male and 78 female) DMU students from different ethnic backgrounds (41 Asia, 41 Africa, 27 Europe, 1 Central America and 1 Caribbean), using a validated variant of the Nutrition Norfolk Food Frequency Questionnaire (EPIC-Norfolk FFQ). Hg was analysed in scalp-hair provided by 73 of the participants (58 female) by ICP-MS. **RESULTS:** Hg was detected in 63 hair samples (49 female; LoD=0.0310 µg/g) and were significantly higher in male participants (p-value<0.05; data presented as mean and range, in µg/g): [0.9794 (0.0891-6.6073) vs. 0.2956 (0.0443-1.6732)]. The concentrations of total-Hg are higher than the mean average reported in Polish individuals aged 21-22 years-old (0.435 vs. 0.150 µg/g) but lower than the geometric mean reported in Spanish individuals aged 18-29 years-old (0.30 vs. 1.65 µg/g). Hg was only correlated with chocolate intake (r=-0.2957; p-value<0.05). However, chocolate intake did not show differences due to sex in the population monitored. Similar results were observed for the intake of fish/seafood (the major source of Hg in the diet), i.e. intake did not show significance due to sex (p-value=0.826) or ethnic background (p-value=0.589). However, the intake of fish was much higher in male participants (72.656 vs. 53.907 g/day), which could explain the sex differences found in total-Hg in hair. **CONCLUSIONS:** Although the levels of Hg found in hair would highlight a generally lower exposure to Hg in the population studied when comparing with other studies on populations that traditionally eat more fish/seafood, some individuals presented higher concentrations of total-Hg than the USEPA recommended reference level (1 µg/g), individuals that should be followed up with dietary recommendations.

Keywords: Exposures, Food/nutrition, Exposure Assessment, Mercury