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ORIGINS: nutrition profile of pregnant women in a longitudinal birth cohort in Western Australia

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The theory of Developmental Origins of Health and Disease (DOHaD) suggests that the foetal origins of adult diseases are determined by perinatal exposure. Therefore, dietary intake during pregnancy is an opportunistic time to influence future disease susceptibility in infants. ORIGINS is a longitudinal birth cohort study aimed to reduce the rising epidemic of non-communicable diseases through 'a healthy start to life'⁽¹⁾. We aimed to describe the dietary intakes of pregnant women in this cohort in Western Australia and compare this to the Nutrient Reference Values (NRVs) and Australian Recommended Food Score (ARFS)⁽²⁾. The dietary intakes of women were collected using the Australian Eating Survey (AES), a semi-quantitative Food Frequency Questionnaire (FFQ). A total of n = 374 women completed the AES FFQ⁽³⁾ at both 18- and 36-weeks' gestation between 2016 and 2023. A descriptive cross-sectional analysis using STATA, was used to explore the macronutrient, micronutrient and food group intake at the two time points. Participants had a mean age of 32 years, were of Caucasian background (82.6%), had a tertiary education (78.1%), and majority were in the normal (37.7%) or overweight (29.4%) BMI category. Overall, it was found that the energy contribution from carbohydrate was low as compared to the recommended range (44% vs 45–65%); however, total fat (37% vs 30–35%) and saturated fat was high (14% vs < 10%). Participants were below the NRVs for micronutrient intakes for: calcium (~17–21% below NRVs), iron (~52% below NRVs), iodine (~21–23% below NRVs) and folate (~40% below NRVs) at 18- or 36-weeks. Participants consumed double the sodium NRVs (~198–201% above NRVs), and had low diet quality scores for all food groups (score = 35/73) at both timepoints. These findings suggest that despite ongoing promotion of healthy eating during pregnancy, more dietary support and education may be required during pregnancy for both mother and the long-term health of their offspring

References

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