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## Dietary assessment of older and more educated pregnant women in Ireland during their third trimester

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Optimal nutrition during pregnancy is critical given the potential long term impact that nutritional imbalance has upon the risk of morbidity and mortality for the infant<sup>(1–3)</sup>. High intakes of fat and low intakes of carbohydrates during pregnancy can result in a higher risk of impaired glucose tolerance for the mother<sup>(4,5)</sup> and a larger-for-gestational-age birth<sup>(6)</sup>. Previous research has shown that older, higher income, more educated pregnant women have a better overall quality of diet<sup>(7,8)</sup>. However, little research has investigated women’s diets during the final trimester of pregnancy, when foetal growth is fastest. The aim of this study was to assess the diets’ of a group of women living in Ireland, during the third trimester of pregnancy. Eighty-seven pregnant women were recruited during the third trimester of pregnancy (32–38 weeks gestation). Diets were assessed using a 7-day semi-quantitative food diary and analysed using Dietplan 6.4 and SPSS 17.0.

Results showed the mean age of the women were 35 years. The majority of women taking part in the study were Irish nationals (81.6%), married (83.9%), employed (81.6%) and educated to degree level or higher (88.5%). An imbalance in the intake of macro-nutrients was reported, with majority of women consuming higher than recommended levels of fat (37%) and saturated fat (15%) and lower than recommended levels of carbohydrates (49%) as a proportion of their energy intakes.

Nutrient	Group Mean	Irish Recommendations	% above Recommendations
Protein	15%	10–15%	31%
Carbohydrate	49%	55%	14%
Fat	37%	30–35%	69%
Saturated Fat	15%	<10%	92%

While the estimated micronutrient intakes were above the Recommended Dietary Allowances (RDA-including an increment for pregnancy)<sup>(9)</sup> for the majority of nutrients investigated, some important nutrients had mean intakes below the RDA.

Nutrient	Group Mean	SD	RDA	% below Recommendations RDA
Calcium (mg/d)	1023	263	1200	74%
Iron (mg/d)	12.5	3.5	15	82%
Vitamin D (µg/d)	2.79	1.64	10	100%
Folate (µg/d)	278.3	88.2	500	99%

This data suggests that despite being from a more advantaged and more educated background, pregnant women are consuming high intakes of fat and saturated fat in their diet and are not reaching the recommended intakes of essential vitamins and minerals during their third trimester of pregnancy. The high level of fat in the diet indicates a lack of awareness regarding the importance of nutrient dense foods during pregnancy to meet increased micronutrient requirements. It also highlights the need for further and more targeted education and interventions among pregnant women to achieve the current dietary guidelines.

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