

Resistant Starch Intake Is Low in Australian Adults With Irritable Bowel Syndrome Who Follow a Low FODMAP Diet

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Objectives: This observational study aimed to assess dietary intake, including resistant starch (RS) in adults with Irritable Bowel Syndrome (IBS), who follow a habitual diet low in Fermentable Oligosaccharides, Disaccharides, Monosaccharides and Polyols (FODMAP) (LFD).

Methods: Twenty-six participants in Perth, Western Australia with IBS (23 females, aged mean \pm SD 37 ± 13 years with a Body Mass Index of 23 ± 3 kg/m²) had FODMAP content assessed using the Monash University Comprehensive Nutrition Assessment Questionnaire and dietary RS from 3-d weighed food diary analysed using published RS values for Australian foods incorporated into a dietary database analysed using FoodWorks 10 (Xyris, QLD, Australia). Descriptive statistics and correlation analysis were performed using SPSS v27 (IBM, 2017).

Results: Out of all participants 35% ($n = 9$) were on a LFD > 1 year, median 12 months (Interquartile range = 21.8 months), and 77%

($n = 20$) were at the personalized phase. Median FODMAP intake was 9.6 ± 9.4 g/d and positively associated with the length of time on a LFD, partial correlation (adjusted with BMI and age) was 0.541 ($P = 0.003$). A therapeutic FODMAP intake < 12 g/d (unvalidated) was achieved by 73% ($n = 19$) of participants. Energy from fat mean \pm SD $38.1 \pm 9.6\%$ and saturated fat $12.4 \pm 3.9\%$ were above Australian recommendations at 20–35% and $< 10\%$, respectively. Mean energy contributed by carbohydrates, $36 \pm 9.2\%$ was below recommendations (45–65%). Despite the avoidance of plant-based foods high in FODMAP, dietary fibre intake was 20.7 ± 7.4 g/d, equivalent to national Australian studies of adults but less than dietary targets (male 38 g, female 28 g). Habitual RS consumption was 2.1 ± 1.2 g/d, lower than estimations of both typical Australian diets (3.7 (1.9–5.6) g/d) and a LFD study providing all meals (6.9 (3.6–10.3) g/d). Consumptions of vegetables and fruit were 3.9 ± 2.9 and 0.3 ± 1.6 serves/d respectively, and less than the Australian recommendations of 5–6 and 2 serves/d respectively.

Conclusions: This is the first study in IBS patients to measure RS intake in habitual LFD. Australian adults with IBS consuming a LFD should integrate additional RS sources when personalising their LFD. On the premise that food consumed will not exacerbate IBS symptoms, patients on a LFD should increase the intake of vegetables and fruits based on personal tolerance.

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