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## Dietary intakes and body composition in adult patients with long-standing Crohn's disease currently in remission

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Weight loss and low body fat have been reported in adult patients with Crohn's disease (CD)<sup>(1,2)</sup>. In addition, deficiencies in several nutrients have also been reported in patients with CD<sup>(3)</sup>, but it is not clear whether these deficiencies arise as a consequence of inadequate intake and/or poor intestinal absorption and increased requirement, as a result of disease. The aim of the study was to compare dietary intakes and body composition of a group of adult patients with long-standing CD, currently in remission, with that of a group of age- and gender-matched healthy control subjects.

Forty adult patients with CD (eighteen men and twenty-two women), currently in remission and with long-standing (>5 years) disease, were recruited from the Inflammatory Bowel Disease Clinic of Cork University Hospital. Remission was defined at the time of study as the absence of gastrointestinal symptoms and not requiring therapeutic doses of corticosteroids. Forty age- and gender-matched healthy control subjects were recruited from the Cork City area. Dietary intake was estimated using a 7-day diet history and analysed for nutrients using WISP (Weighted Intake Software Program) (Tinuviel Software, Warrington, UK). All statistical analysis was carried out using SPSS version 15.0 (SPSS Inc., Chicago, IL).

There was a significant ( $P < 0.01$ ) difference in the proportion of patients with CD and healthy controls that were classified (on basis of BMI) as being underweight, normal weight, overweight or obese. There were no significant differences in waist circumference ( $P = 0.41$ ), hip circumference ( $P = 0.63$ ), percentage body fat ( $P = 0.1$ ) mid-arm muscle area ( $P = 0.27$ ), biceps ( $P = 0.55$ ) and subscapular ( $P = 0.22$ ) skinfold thickness measurements in either group. Skinfold thickness measurements at the supra-iliac and triceps sites were significantly ( $P = 0.03$ ) and borderline significantly ( $P = 0.08$ ) different respectively between patients with CD and healthy matched controls.

Weight category	BMI category (kg/m <sup>2</sup> )	No. subjects	
		Patients with CD (n 40)	Matched controls (n 40)
Underweight	< 18	1	0
Normal weight	18–25	19	10
Overweight	> 25	9	24
Obese	> 30	11	6

The mean daily intake of several macronutrients and micronutrients was similar in patients with CD and controls. The patients with CD had significantly ( $P < 0.05$ – $P < 0.001$ ) lower mean daily intakes of some micronutrients (%; K 20, Mg 24, P 13, total Fe 26, Cu 16, Zn 13, Mn 22, β-carotene 16, thiamine 17, niacin 15, total folate 23, biotin 25 and vitamin (vit) C 40) compared with those for control subjects. The percentage below the European estimated average requirement<sup>(4)</sup> for all patients with CD (n 40) v. controls (n 40) was:

	K	Ca	Mg	Fe	Zn	Se	I	Vit A	Vit E	Thiamine	Riboflavin	Niacin	Vit C
CD	25	8	3	30	6	30	15	55	10	3	5	10	13
Control	15	5	0	13	0	28	23	58	0	0	10	8	0

In conclusion, the study showed that patients with CD had inadequate intakes of a number of micronutrients, which may contribute to deficiencies or suboptimal status for these nutrients.

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