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Macro- and micronutrient intakes of Royal Air Force recruits at the start of military training

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Royal Air Force (RAF) phase-1 recruit training represents 9 weeks of initial professional and physical training and provides a transition from civilian to military life. Young men and women (16–33 years) complete phase-1 training before commencing their specialist branch (phase-2) training. Adequate nutrition may play an important role in reducing illness and injury, thus contributing to a successful training outcome.

RAF recruits attending a pre-recruit training course at RAF Halton were given an initial study brief, after which 719 recruits consented to participate. Dietary intake was recorded using a modified FFQ, which was distributed in a classroom at the start of training. Studies examining the validity and reliability of the modified FFQ are reported elsewhere[1,2].

Macro- and micronutrient intakes are shown in the Table. The carbohydrate (CHO), fat and protein intakes represented: 46, 37 and 17% total energy intake respectively for males; and 47, 35 and 18% total energy intake respectively for females. Thus, the mean percentage energy from CHO was lower than that recommended for physically-active individuals. Mean Ca and vitamin C intakes were above the UK military training dietary reference values, but total energy and mean Fe intakes for both male and female recruits were less than the corresponding required values[3].

	Energy (MJ)		CHO (g)		Fat (g)		Protein (g)		Vitamin C (mg)		Ca (mg)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Males (*n* 612)	10.0	3.72	273	102	97.1	42.7	100	34.3	114	51.0	1358	493
Females (*n* 107)	8.2**	3.54	236**	95.4	76.5**	43.0	85.6**	33.0	127*	52.7	1149**	441

Mean values were significantly different from those for males: *$P<0.05$, **$P<0.01$.

A recruit's working day continues to be long and physically demanding throughout phase-1 training and there are concerns that food intake may not meet nutritional requirements.

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