

NUTRITION AND SAILING

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Athletes in training have been shown to have increased energy requirements ranging from 2 000 to 6 200 kJ per day. Specific guidelines for assessing increments in energy allowance for strenuous exercise of a short duration are well documented (Forgac 1979). However, dietary recommendations for long distance sports of a long duration, such as ocean sailing, are scarce. I decided to investigate the dietary intakes of a crew of four persons undertaking a voyage on a small sailing boat. The duration of the voyage was 18 days and 8 days were spent at sea. The author documented all food and drink consumed during the 18 days and the diets were analysed for energy consumption. Body weights of the crew remained stable or dropped very slightly over the period.

The results for energy intake are shown in Table 1.

Table 1 Average energy intake compared with average energy requirements (NHMRC 1979)

	Body Mass (kg)	No. of Persons	Grade 1 Reference (kJ)	Grade 2 (kJ)	Grade 3 (kJ)	Voyage Diet (kJ)	Voyage Diet Difference To Grade 1 (kJ)
Men	61-71	2	10 500	+ 1 400	+ 2 800		+ 2 573
(35 yrs)	71-75	1	11 350	+ 1 600	+ 3 200	13 073**	+ 1 723
Woman	60	1	8 900	+ 1 200	+ 2 400		+ 4 173
(30 yrs)							

** mean value

In order to determine the source of the additional energy in the diets, the proportions of nutrients and alcohol were calculated and are shown in Table 2.

Table 2 The proportion of energy derived from nutrients and alcohol

Protein	Carbohydrate	Fat	Alcohol
12%	48%	30%	10%

The results show that the crew had increased energy requirements close to Grade 3 (NHMRC 1971). The additional energy was obtained largely from carbohydrate and alcohol. Activities that consume little energy on land are performed at sea while bracing oneself against the motion of the boat and thus require significant energy expenditure. Tasks such as sail handling and steering are energy-demanding activities.

The results of this study indicate that, during a strenuous sea voyage, such as ocean racing, energy requirements are high and should be considered an important part of the planning for such an event.

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NHMRC.(1979). 'Dietary Allowances for use in Australia'. (Australian Government Publishing Service : Canberra).

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