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Nutritional Status and Body Composition of New Zealand Jockeys

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Abstract

A requirement of the horse racing industry is for jockeys to achieve and maintain a low body weight. This potentially impacts on their food and fluid intake which may in turn influence both their short and long term health.

The purpose of this study was to determine the nutritional status, eating behaviours and body composition of jockeys working in the New Zealand Racing Industry.

Twenty jockeys, 9 senior (4 males, 5 females) and 11 apprentice (2 males, 9 females) were recruited. Questionnaires were used to provide demographic data, information on eating habits, smoking, and attempted practices in 'making weight'. The Eating Attitudes Test-26 (EAT-26) was used to determine the presence of disturbed eating patterns. Jockeys completed 7-day weighed food records and Dual Energy X-ray Absorptiometry (DEXA) was used to determine bone mineral density (BMD) and body composition. Several indices were measured to determine iron status.

Mean age of senior and apprentice jockeys was 28.7 ± 5.0 yrs and 20.5 ± 3.8 yrs respectively. There was a significant ($p < .05$) weight difference between male and female jockeys (52.8 ± 2.4 kg vs 49.3 ± 3.4 kg) however there was no difference between their body mass index of 20.1 ± 1.5 kg/m² and 20.2 ± 1.5 kg/m². Sixty-seven percent of jockeys used a variety of methods to 'make weight', including; diuretics, saunas, hot baths, exercise, and the restriction of food and fluids.

Twenty percent of jockeys had scores above the 'cut off' of 20 for the EAT suggesting some level of disordered eating. There was no significant difference ($p > .05$) between the mean scores for male and female jockeys.

Mean energy intake for male jockeys was 6769 ± 1339 kJ and for females 6213 ± 1797 kJ per day and the percentage of energy from carbohydrates (CHO) for all jockeys was 45.5 ± 7.9 . Energy and CHO intakes were below the recommendations for both the athletic and non-athletic populations. Male and female jockeys did not meet the RDI for a number of micronutrients.

Forty-four percent of jockeys were classified as osteopenic (2 males, 6 females). A number of factors may have contributed to this outcome, namely; reduced calcium intake, delayed menarche (14.5 yrs) in female jockeys, alcohol intake and smoking. There was a significant ($p < .05$) difference in the BMD of the distal wrist measurements compared with the measurements at the other three sites; lumbar

spine, total body and femoral neck. Mechanical stress placed on the wrist while riding may have increased the BMD of that area.

Percentage of body fat of male and female jockeys was 11.7 ± 2.9 and 23.6 ± 3.8 and for female jockeys this was greater than the recommendations for these athletes.

Iron status was normal in all jockeys.

The New Zealand Racing Conference has imposed weight restrictions on jockeys in the horse racing industry. As a consequence of this a number of jockeys compromise their nutritional status which may influence their sporting performance and both their short and long term health.

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Contents

1	Introduction	1
2	Literature Review	
2.1	The Early Days	3
2.2	Contemporary Practice	4
2.3	Benefits of Optimal Nutrition	
2.3.1	Macronutrients	5
2.3.2	Micronutrients	9
2.3.3	Supplementation	12
2.4	Body Weight Management	
2.4.1	Making Weight Practices	13
2.4.2	Body Composition	16
2.4.3	The Apprentice Years	17
2.4.4	Rules of Racing	17
2.4.5	Changing Times	19
2.5	Consequences of Making Weight	20
2.6	Eating Disorders	22
3	Methods	25
4	Results	
4.1	Anthropometry	28
4.2	Questionnaire- General	28
4.3	Questionnaire- EAT	30
4.4	Questionnaire- Menstrual Status	31
4.5	Activity/Exercise	31
4.6	Dietary Analysis	31
4.7	Bone Mineral Density	36
4.8	Body Composition	37
4.9	Iron Status	38
5	Discussion	39
6	Conclusion	52
	References	55

Appendices

1	Literature Review Databases	67
2	Consent Form	69
3 A	Questionnaire- General	71
3 B	Questionnaire- EAT	77
3 C	Questionnaire- Menstrual Status	79
4 A	Weighed Food Record Sheets	81
4 B	Instruction Sheet	83
4 C	Training/Activity/Making Weight	85
5	DEXA	87
6	Results of Questionnaire	89

List of Tables

Table 2.1	Anthropometric Comparison Between Jockeys and New Zealand Population Norms (Mean)	..... 15
Table 4.1	Age and Athropometric Measurements of Jockeys	..... 28
Table 4.2	Attempted Practices to 'Make Weight' (%)	..... 29
Table 4.3	Current Practices of Attempting to 'Make Weight' (%)	..... 30
Table 4.4	Eating Attitudes Test (EAT)	..... 31
Table 4.5	Macronutrient Analysis of 7-Day Weighed Food Records	..... 33
Table 4.6	Micronutrient Analysis of 7-Day Weighed Food Records	..... 34
Table 4.7	Mean T-scores of Bone Mineral Density at Selected Sites	..... 37
Table 4.8	Percentage of Body Fat for All Jockeys	..... 37
Table 4.9	Iron Status Measurements for Jockeys	..... 38