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BODY COMPOSITION AND DIETARY INTAKE IN BRAZILIAN CROSSFIT® ATHLETES: A DESCRIPTIVE STUDY

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Abstract:

CrossFit® is a training program created by Greg Glessman in 1995 and consists of performing high intensity functional movements. Studies evaluating nutrient intake in CrossFit® athletes are scarce.

PURPOSE: To assess dietary intake and body composition in Brazilian CrossFit® athletes.

METHODS: A total of 25 CrossFit® athletes, 13 men (52%), aged between 18 and 49 years, were evaluated in this descriptive study. Weight, height, and body mass index (BMI) were measured. Body composition was assessed using a portable ultrasound Bodymetrix BX2000 (Intelamatrix®, CA, USA). To assess the dietary intake, 175 diets were analyzed, with an average of 7 diets per athlete, encompassing a complete training cycle, from baseline to competition, and prepared by dietitians. The mean of these seven diets were used in the analysis of macronutrient and micronutrient intake. Statistical analyses were carried out by Kolmogorov-Smirnov Test, Chi-square, and Student's *t* test.

RESULTS: Mean age was 32.0 ± 8.9 years, with no differences between men and women ($P=0.208$). The mean BMI was 26.4 ± 2.6 kg/m² and the mean body fat percentage was $12.0 \pm 4.9\%$. The mean energy intake was 2844.1 ± 723.7 kcal/day and the energy intake per kilogram of body weight was 36.7 ± 10.8 kcal/kg/day. Protein intake was 2.2 ± 0.4 g/kg/day, and carbohydrate intake was 4.6 ± 2.3 g/kg/day. Sixteen athletes (64%) consumed less carbohydrates than proposed in recommendations for this training (5 to 12

g/kg/day). There were no differences between men and women in energy, carbohydrate, protein, and fat intake. As for micronutrients, most athletes (>50%) showed an insufficient intake of calcium, potassium, selenium, and vitamins A, B9, B12, and D.

CONCLUSIONS: This study demonstrated an insufficient consumption of carbohydrates, usually observed in CrossFit®. An insufficient intake of calcium, potassium, selenium, and some vitamins were also observed. It is important to educate athletes and coaches about individual nutritional needs, aiming to preserve health and enhance sports performance in all phases of CrossFit® training.

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