

NUTRITIONAL AND PHYSIOLOGICAL STATUS OF SYNCHRONIZED SWIMMERS

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Objectives

The aim was to present national team of synchronized swimmers who are started preparation for Olympic Games in Rio 2016.

Materials/Methods

Anthropometric measurements, spirometry, blood samples, flexibility tests, ergospirometry test and hand grip strength test were conducted. They completed three-day diet records, BES, EAT-26, PDS and SCOOF questionnaire.

Results

The subjects were 14 trained female synchronized swimmers with mean age, height, weight and F% of 15.2 ± 1.3 years, 167.3 ± 6.3 cm, 53.8 ± 4.2 kg and 21.8 ± 3.6 . Average BMI was 19.2 ± 0.9 kg/m² which reflected lowest weight category. Daily energy intake of 2364.8 ± 531 kcal and fluid intake of 1782.3 ± 555 ml were significant lower ($p < 0.001$) than those obtained by the formula. Macronutrient ratio with high intake of fat (34%), low CHO (49%) and normal proteins (17%) were not in desirable range. The mean intakes of Mg, fiber, Ca, Fe, K, Vit.C, Vit.B6 and Vit.B6 were below DRI with higher intakes of Na and P. Subnormal serum ferritin was found in 3 swimmers. VO_2 max of 38.9 ml/min/kg and results of spirometry, flexibility and strength tests showed average results. All girls were in postmenarchal period. Three swimmers reported negative feelings about their appearance with risk of eating disorder.

Conclusion

Dietary practices and eating behaviors of synchronized swimmers indicates a need for continuous screening and dietary intervention with aim to maintain adequate nutrition, improve health status and reduce risk of eating disorder, as long term strategy for high sport performance before Olympic Games.

References

1. Lundy, B. 2011. Nutrition for synchronized swimming: A review. I. J. of Sport Nutrition and Exercise Metabolism, 21 (5), pp. 436-445.