Hydration status and water sources in 9-10 year soccer players

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Introduction: Physical activity leads to an increased water loss via sweating, which may increase the risk of dehydration.

Objective: To evaluate the hydration status and its relation to food intake in a group of children that play football.

Method: 36 male 9-10 years children were invited to participate in this study, and 30 completed a 24h urine collection. The Free Water Reserve (FWR) was used to assess the hydration status; additionally, a food record corresponding to the day of urine collection and a lifestyle, and socio-demographic questionnaire was filled with parents help. Anthropometric data were obtained. Food and beverage groups were created and models of unconditional logistic regression were fitted in order to estimate the magnitude of the association between the contribution of food’s water content and the hydration status.

Results: 43.3% of children were classified as at risk of hypohydration. Compared to children who reported low fruit and vegetable intake (at or below the median), those with higher intake (above median) were at decreased risk of hypohydration (OR = 0.19, 95% CI 0.04 - 0.94, p = 0.041).

Conclusions: Almost half of this sample of 9-10 years soccer players was at risk of hypohydration. Fruit and vegetables intake was significantly associated with a better hydration status.

Key words: children, hydration status, sport.

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