Dehydration, cognitive and skill performance in sport. Systematic review

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Introduction: Currently, there is a lack of information about the effect of dehydration on cognitive performance in athletes. Moreover, this information could be an incentive for athletes to improve their liquid intake and, consequently, obtain performance and health benefits.

Objective: To check the effect of dehydration on cognitive and skill performance in sport.

Method: Systematic review following the Campbell Collaboration guidelines. A bibliographic search was performed in Web of Science using the following topic search strategy: (dehydration OR hydration OR liquid* OR fluid*) AND (cognitive performance OR decision making) AND (sport* OR athlete*); by two independent reviewers. Inclusion criteria were: original research that test the effect of dehydration on cognitive performance with similar conditions for experimental and control groups, not including food-intake restriction. From a total of 56 articles, 12 articles met the inclusion criteria.

Results: Most of the studies (n=8) showed an impairment of cognitive capacities or skills in sport by dehydration. However, 4 articles did not find significant effects. In general, laboratory tasks are more sensitive to find negative effects of dehydration than a more real context (e.g., basketball shooting).

Conclusions: Cofound variables could affect results due to dehydration induction mechanisms and lack of control studies. Notwithstanding, dehydration seems to impair the cognitive performance and it can be used as an incentive for athletes to prevent dehydration and health problems.

Key words: cognitive performance, making decision, athletes.

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Relation of liquid-intake habits and nutritional status, dependency and quality of life in malnourished patients

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Introduction: To describe the determinants of fluid intake in the elderly. Urine osmolality will also be measured.

Method: Descriptive, transversal and observational study. Sample: people aged ≥ 65 years from Toledo. Exclusion criteria: enteral-parenteral nutrition, pathology with water restriction, current acute process, terminal illness and severe dementia. Sampling: recruitment of convenience. Variables (Ad hoc questionnaire): sociodemographic, clinical (drugs, water intake volume, nutritional habits, symptoms and related factors), density and urine pH. Statistical analysis: SPSS 22. Pilot study was conducted to verify the relevance of the questionnaire.

Results: Pilot study: Sixteen adults. 43.8% women, aged 77±7.46. Urine density=1,029.38±6.80, pH=6.03±0.53. Drugs: 12.5% don’t take, 25% take 1-3, 62.5% take ≥4.75% take IECAS and 31.25% take diuretics. Wa-

Conclusions: Elderly don’t have a good habit of hydration. It’s important to prevent dehydration to minimize the effects on their health. More measures should be included in Health Programs.

Key words: water, hydration, thirst, elderly, fluid-intake.

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