Corellation Intake of Energy, Protein, Fluid, Physical Activity and Hydration Status with Vo2max among Hockey Athlete

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Abstract

Objective: Hockey is a sport which need high determination thus every athlete must have good physical condition and optimal VO2Max level during the game. When VO2Max level is high then the endurance level is also higher, which means someone who has a high VO2Max value will not feel tired easily after doing a series of activities. This study aimed to analyze the Correlation of energy, protein, fluid intake, physical activity and hydration status to VO2Max hockey athletes.

Methods: This quantitative research use cross-sectional approach. Statistical analysis using Pearson and spearman correlation test. This study involved 32 Indonesian Hockey player.

Results: More than half of Indonesian Hockey athletes have VO2Max value in the categories below standard with average 36.55±8.58 ml/kg/minute (56.2%), less Energy Intake with average 1783.31±428.15 kcal (53.1%), less Protein Intake with average 50.47±12.61 gram (56.3), less Fluid Intake with average 1957.64±569.59 ml (59.4%), Hydration status of hockey athlete before and after exercise in the state of mild dehydration condition are 17 people (53.1%). The physical activity of the hockey athletes is moderate with an average of 1.7759 ± 0.44 PAL (34.4%). Statistical test result showed a correlation between energy intake, fluid intake, physical activity, hydration status before exercise with Vo2Max (p≤0.05), however there is no correlation between energy intake and hydration status after exercise with Vo2Max (p≥0.05).

Conclusions: Energy and fluid intake, physical activity and hydration status are determinant factors to VO2Max before exercise.

Keywords: E intake, Fluid intake, Hydration, vo2max.