

Corellation Intake of Energy, Protein, Fluid, Physical Activity and Hydration Status with  
Vo<sub>2</sub>max 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 VO<sub>2</sub>Max level during the game. When VO<sub>2</sub>Max level is high then the endurance level is also higher, which means someone who has a high VO<sub>2</sub>Max 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 VO<sub>2</sub>Max 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 VO<sub>2</sub>Max 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 kkal (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 VO<sub>2</sub>Max ( $p \leq 0.05$ ), however there is no correlation between energy intake and hydration status after exercise with VO<sub>2</sub>Max ( $p \geq 0.05$ ).

Conclusions: Energy and fluid intake, physical activity and hydration status are determinant factors to VO<sub>2</sub>Max before exercise.

Keywords: E intake, Fluid intake, Hydration, vo<sub>2</sub>max.