

ABSTRACT

Title : *Relationship of Energy Intake, Nutrition, Liquid, Nutritional Status, and Fitness Against Gymnastic Athlete's Pain Level*

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Background: *Injuries are abnormalities that occur in the body that result in pain, heat, redness and swelling, and cannot function in the muscles of the tendons, ligaments, joints and bones due to excessive movement or accidental activity. The level of pain injury that occurs to sportsmen can be influenced by several factors, namely macro nutrient intake, micronutrients, nutritional status, fitness, muscle strength, psychological and so on. Method:* *This study uses cross-sectional design and quantitative methods. The research instrument used in this study was a 3x24 hour food recall to ask about macro and micro intake, nutritional status using body weight and height which was then used as a result of BMI / fitness, using VO_{2Max} results from secondary data, and injury pain using VAS. Results:* *Energy intake, macro nutrients, micronutrients (calcium, iron, vitamin D, and water), nutritional status and fitness are not significantly related to the level of injury pain in gymnastics athletes. The results of the relationship between energy intake and injury pain level ($p>0.05$), relationship of protein intake with injury pain level ($p>0.05$), relationship of fat intake with injury pain level ($p>0.05$), relationship of carbohydrate intake with injury pain level ($p>0.05$), correlation of calcium intake with injury pain level ($p>0.05$), association of iron intake with injury pain level ($p>0.05$), association of vitamin D intake with injury pain level ($p>0.05$), relationship between water intake and injury pain level ($p>0.05$), the relationship of nutritional status with the level of injury pain ($p>0.05$), and the relationship of fitness to the level of pain injury ($p>0.05$). Conclusion:* *Energy intake, macro and micro nutrients (calcium, iron, vitamin D, and water) do not necessarily affect the level of injury pain in gymnastics athletes. As well as nutritional status with BMI / U and fitness with VO_{2Max} also did not affect the occurrence of the level of pain injury in gymnastics athletes.*

Keywords: *energy intake, nutrient intake, nutritional status, fitness, level of injury pain*