

Macronutrients for High and Low Injury Risk Collegiate Rodeo Athletes Compared to Recommended Dietary Allowances

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ABSTRACT

Rodeo is a high-intensity, intermittent sport in nature unlike popular American sports. The production of empirical research outlining the physical demands and ideal training methods connected to rodeo and improving performance has not matched the rate of growth the sport of rodeo has experienced. Particularly regarding nutritional recommendations, limited research explains nutrition and its role in injury prevention and the process of recovery in rodeo athletes. **PURPOSE:** The purpose was to investigate the differences of macronutrients between high risk and low risk of injury in rodeo athletes compared to recommended daily allowances (RDA). **METHODS:** College rodeo athletes from a mid-size university in the southwest region were recruited to be a part of the study ($n=150$). Subjects completed a 3-day food record - 2 non-consecutive standard nutritional intake days and 1 unconventional day. Dietary intake records were input into Elizabeth Stewart Hands and Associates (ESHA) Food Processor Nutrition Analysis Software. Low and high-risk categorization was performed across nine college rodeo events. In accordance with previous literature outlying injury percentages (>10 injuries; low-risk <10 injuries per year). Subjects that competed in barrel racing, breakaway, and team roping were categorized as low injury risk athletes. Bull riding, saddle bronc, bareback, team roping, goat-tying, and steer wrestling were grouped as high-risk. The RDA macronutrient percentage recommendations (protein 25%, carbohydrates 55%, fats 20%) were utilized as comparative values. A paired sample t-test ($p < .05$) was used to analyze the average macronutrients intake of rodeo athletes compared to recommended daily allowance (RDA) for high-risk and low-risk rodeo athletes. **RESULTS:** High-risk athletes' average macronutrients were significantly different when compared to the RDA (Kcal $p<.001$; protein $p=.007$; carbohydrates $p<.001$; fat $p=.18$). Low-risk athletes had shown significant differences in all categories except for fat ($p=.661$). **CONCLUSION:** These data will be able to expose the surpluses and deficiencies of the dietary intake of the collegiate rodeo athletes. Low-risk rodeo athletes experienced overconsumption in fat and under consume the recommended number of kcals, protein and carbohydrates. High-risk athletes' data showed under consumption in all areas explored. These data suggest for both adjustments should be made to address these deficiencies.