

## Difference in Simple and Complex Reaction Time Test Score Among College Rodeo Athletes

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### ABSTRACT

Various sports rely heavily on reaction time (RT) to produce high levels of performance, and as expected, difference in RT are present within and between sporting activities. The sport of rodeo is a high velocity/intensity sport that require athletes to reaction quickly to the movement(s) of uncooperative livestock. However, no previous studies have investigated the RT profile of rodeo athletes and the differences in RT between rodeo events. **PURPOSE:** The purpose of this investigation was to establish simple and complex RT norms for rodeo athletes and secondly, identify RT difference between rodeo events. **METHODS:** College rodeo athletes (n = 39) from a mid-sized university in the southwest region volunteered as participates in this study. The athletes were categorized according to their rodeo event: Steer Wrestling (n = 3), Roping (n = 15), Goat Tying (n = 6), Barrel Racing (n = 10), or Rough Stock (n = 5). All rodeo athletes completed two RT tests, simple RT test (sRT) and complex RT test (cRT), which yielded RT measures for average sRT response, average cRT response, total sRT, and total cRT. These RT metrics were utilized to establish rodeo RT norms and describe differences among rodeo events. Basic descriptive statistics were calculated to establish rodeo RT norms and secondly, a MANOVA was utilized to differentiate reaction time scores between rodeo events. **RESULTS:** There were no significant difference between Steer Wrestling (sRT Ave. Total 30.52±2.95; cRT Ave. Total 34.21±2.70), Ropers (sRT Ave. Total 32.29±4.25; cRT Ave. Total 35.70±4.56), Goat Tying (sRT Ave. Total 32.42±1.74; cRT Ave. Total 38.3±5.47), Barrel Racing (sRT Ave. Total 32.77±3.45; cRT Ave. Total 35.29±2.46), and Rough Stock (sRT Ave. Total 32.12±3.45; cRT Ave. Total 35.32±4.14) for all reaction time measures. **CONCLUSION:** The results of the investigation indicated RT performance were similar among all rodeo events. These results additionally provide newly established RT norms for rodeo athletes that could be utilized as baseline target metrics for RT training.