

Thanawut Seangboon, Acting SubLt. 2007: The Effects of Caffeine on Reaction Time and Speed of Sprinters. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Miss Apasara Arkarapanthu, Ph.D. 97 pages.

This research aims to investigate the effects of caffeine on reaction time and speed of sprinters using the double-blind crossover design. The subjects were six male sprinters aged 17-19 who competed as representatives of Thailand. These subjects drank five types of drink i.e. W and S once each and coffee containing 0.4167 mg/kg BW (D), 3.5 mg/kg BW (M) and 7 mg/kg BW (C) twice each in total volume of 250 ml. The experiments were done eight times separated by at least three days separated. These subjects were examined and their simple reaction time was recorded before drinking, and 25, 50, 75, 100 and 125 minutes after drinking. Sixty minutes after drinking, they were examined and their starting reaction time, 100 meter running speed and running times at 15, 30, 60 and 100 meters were recorded. The data were analyzed for the mean, standard deviation and significant difference by using one-way analysis of variance with repeated measures along with multiple comparison using the LSD method

The results revealed that after the subjects drank S, D, M and C, no significant differences in the simple reaction time, starting reaction time and 100 meters running speed were found. However, all variables tended to be the best after the subjects drank C. During the sprint competition, only 0.01seconds difference between times is significantly important.

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