Intensity of an auditory “go” signal alters sprint start reaction time

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INTRODUCTION

It has been shown in multiple studies that acoustic stimuli of similar intensity to that of a starter’s pistol can evoke a startle response, which also decreases reaction time (Carlsen et al. 2004, Valls-Sole et al. 1995). Also, research on the startle response has shown that as the auditory stimulus increases, the response magnitude (Ikai and Steinhaus 1961) and probability increases, and the response latency decreases (Blumenthal 1996).

HYPOTHESIS

Reaction time will decrease as a function of increases in auditory stimulus intensity.

RESULTS

The results indicated a significant main effect (F(2,8) = 18.62, p< .001). Post hoc analysis (Tukey’s HSD) revealed that the high intensity trials produced significantly shorter reaction times (133±8 ms; mean±SD) compared to the medium (143±4 ms) and high (150±8 ms) intensities, which were not significantly different from each other.

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REFERENCES