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Veering Pattern in Human Walking in Sighted and Blindfolded Conditions

Authors : Triloki Prasad, Subhankar Ghosh, Asis Goswami

Abstract : The information received from visual organ plays an important role in human locomotion and human beings generally veer from the straight line in the absence of visual cue. Since in case of visually impaired persons this support is unavailable they are expected to have a different type of locomotion behaviour than the sighted persons. Higher degree of veering can result in accident or injury during indoor and outdoor activities. Hence, it is important to know the degree of veering that may happen in case of a sighted individual loosing the visual input. The present study was conducted on fifty three volunteers who walked with open and closed eyes, at their comfortable pace, in a grid marked area of 17m by 10m space. The volunteers had to walk in a straight line from a central starting point during three trials and their walking path was marked with a pair of sponge absorbed with three different colours. All volunteers had walked expectedly in straight line during open eye condition but had varied degree of veering during closed eye state. The correlation between the first step side and the side of deviation was not significant in closed eye condition. The number of steps taken in open eye and closed eye condition were significantly different while travelling similar distances. This study reveals that sighted persons become cautious during walking if the visual cue is not available and they reduce the step length so there is increase in step number.

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