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# Trunk, Head, and Step Characteristics During Normal and Narrow-Based Walking Under Deteriorated Sensory Conditions

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## ABSTRACT

The ability to maintain balance while walking is a complex task. Postural sway is a normal part of age, controlled by the vestibular system (20–30 years old). This investigation was based on the somatosensory system, respectively, decrease in vestibular function in older groups to

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while walking. Postural sway is a normal part of age, controlled by the vestibular system (20–30 years old). This investigation was based on the somatosensory system, respectively, decrease in vestibular function in older groups to maintain balance while walking. Postural sway is a normal part of age, controlled by the vestibular system (20–30 years old). This investigation was based on the somatosensory system, respectively, decrease in vestibular function in older groups to

walking condition (by 43.62%) but not in normal walking condition. Older participants adopted a more cautious strategy characterized by lower walking speed when walking on a narrow base and exhibited deteriorated integrative ability of the CNS for head control. Accurate lower limb somatosensation may play a critical role in narrow-based walking.

Keywords: gait head control trunk control step characteristics sensory integration

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