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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 stability in the frontal plane (medialateral direction) while walking is commonly included as a component of motor performance assessment. Postural control in the frontal plane may deteriorate faster and earlier with increasing age, compared to that in the sagittal plane (anteroposterior direction). Fifteen young (20–30 y cruited to investiga d narrow-based w somat surfaces, resp with larger decrease urbed vestibula both age groups t based 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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