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## Effects of head motion on postural stability in participants with chronic motion sensitivity

**Abdulaziz Aoudh Albalwi** Tabuk University, KSA

**Background:** Motion sensitivity, or motion sickness, is common among individuals in modern vehicular and visually stimulating environments; notably, people with normal vestibular function are susceptible to this condition. Motion-provoked dizziness often causes postural instability.

**Purposes:** This study aimed to compare the effects of head motion on postural stability in healthy adults with and without chronic motion sensitivity (CMS) and to determine the effects of head motion direction (horizontal versus vertical) on postural stability.

**Methods:** 60 healthy adult males and females aged 20 to 40 years old were assigned to two groups, 30 participants with CMS and 30 participants without CMS. Pre-data collection, all participants were trained on specific parameters of cervical rotation, flexion and extension. Then, postural stability measurements were taken during three conditions (static, horizontal, and vertical head movements) using the Bertec balance advantage dynamic computerized dynamic posturography (CDP).

**Results:** There was a significant difference between the CMS and non-CMS groups in mean postural stability during head movement in both horizontal and vertical head motions (p=0.005 and p=0.024; respectively), however, no significant difference was shown in mean postural stability between horizontal and vertical head motions within each group (p=0.297 in CMS group and p=0.179 in non-CMS group).

**Conclusion:** The results indicate that healthy young adults without CMS have better postural stability during head motion than those with CMS and that head motion direction (horizontal versus vertical) does not influence postural stability within each study group.

## Biography

Abdulaziz Albalwi has completed his DSc degree from Loma Linda University, USA, in 2017.

abuaceil@hotmail.com

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