

Efficacy of Cawthorne–Cooksey Exercise: Mechanism behind Balance Recovery in the Population of Age 40-60 years

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ABSTRACT

Introduction: Balance impairment and dizziness are common in individuals aged 40-60 years due to age-related decline in vestibular function. The vestibular system plays a crucial role in maintaining postural control by integrating visual, proprioceptive, and sensory inputs. Age-related decline in this integration can lead to dizziness and instability. Cawthorne–Cooksey exercises promote neural plasticity and sensory reweighting, making them relevant for this population. Vestibular rehabilitation, particularly Cawthorne–Cooksey exercises, is widely used to promote central compensation and improve functional balance. The study aims to find out the efficacy of Cawthorne–Cooksey exercises and understand the mechanism behind balance recovery in individuals aged 40-60 years.

Materials and Methods: This review synthesises evidence from 10 articles of randomised controlled trials and experimental studies evaluating the effectiveness of Cawthorne–Cooksey exercises and related vestibular rehabilitation protocols. The methodologies across studies included structured exercise programmes targeting gaze stabilisation, habituation, and postural control, with outcome measures such as the Berg Balance Scale, timed up and go test, dynamic gait index, and dizziness handicap scores.

Results: Findings consistently demonstrate significant improvements in balance, gait, and functional mobility following Cawthorne–Cooksey exercise intervention. The underlying mechanism involves vestibular adaptation, sensory reweighting, and enhancement of visual–vestibular interaction, leading to improved central nervous system compensation. Multimodal approaches incorporating these exercises showed comparatively greater improvements in static and dynamic balance parameters. The exercises stimulate repeated head and eye movements, facilitating habituation and neuroplastic changes. This enhances postural stability and functional independence. Compared to no intervention, outcomes were clinically meaningful, though multimodal approaches sometimes showed slightly superior results.

Conclusion: In conclusion, Cawthorne–Cooksey exercises are an effective, low-cost, and non-invasive intervention for improving balance in the 40-60 age population. Their role in facilitating neuroplastic changes and restoring sensory integration highlights their importance in clinical rehabilitation. Further research is recommended to explore long-term outcomes and optimise individualised protocols.

Keywords: Balance recovery, Cawthorne–Cooksey exercises, Middle-aged adults, Postural stability, Vestibular rehabilitation.

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