

Clarification of Muscle Synergy Structure in Different Human Standing-up Strategies

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Background

Standing-up motion is an important daily activity
Train the elderly and assist stroke patients

Objectives

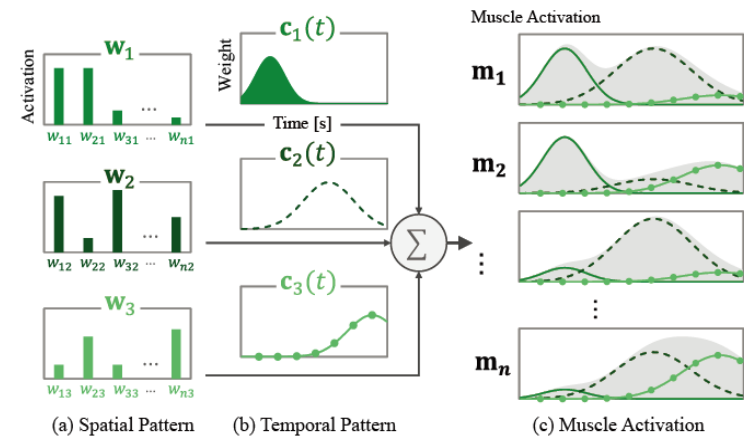
Analyze muscle synergies to clarify the difference among young adults, the elderly and stroke patients

Methods

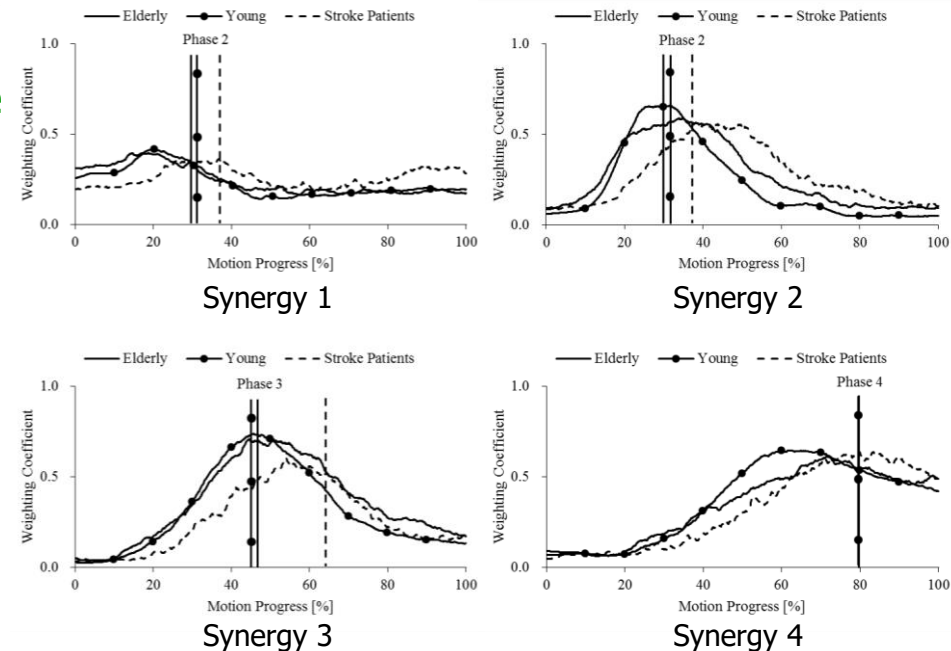
Analyze standing-up motion among young adults, the elderly and stroke patients
Clarify the muscle synergy structure and compare the temporal patterns of muscle synergy model

Results and Discussions

Four muscle synergies represent standing-up motion of young adults, the elderly and stroke patients
Temporal patterns are delayed in muscle synergies of stroke patients



Muscle synergy model



Experimental Results