Functional balance performance in aging: evidence of moderated prediction by strength and power

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Age-related reductions in strength and power are considered to negatively impact balance control, but the existence of a direct association is still an issue of debate (Orr, 2010). This is possibly due to the complexity of its assessment which may involve quantitative measurements of postural sway or functional balance tasks (Granacher et al., 2012). The present work questions whether postural balance interacts with strength and power in determining functional balance performance. Fifty-seven healthy 65 to 75 year old individuals performed tests of dynamic functional balance (chair rise, walking speed under different conditions) and of strength, power and static postural balance.

Results showed that functional balance performances were generally predicted by strength and power and, additionally, by postural balance when conditions required postural adjustments. Interactive effects of postural balance and strength were found, indicating that good postural balance facilitates the utilisation of strength to better perform complex functional balance tasks.

References

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