Despite well-known evidence to support the benefits of daily physical activity, older adults are reported as the most inactive population. For older adults, increasing activity may reduce the risk of certain conditions, help maintain weight, strengthen bones and muscles, improve mental health and overall function, decrease falls risk and healthcare costs, and increase life expectancy. Walking may be a relatively safe and efficient way to meet the recommended amounts of physical activity. Self-monitoring of walking may be done easily with small, unobtrusive wearable activity trackers.

In this systematic review, we examine how wearing different trackers (pedometers and accelerometers) may impact physical activity levels in older adults.

Nine studies met eligibility criteria; four used accelerometers, four used pedometers, and one compared accelerometers to pedometers. These nine studies yielded 939 participants. Of those that reported compliance, researchers achieved over 80% participant compliance. Using pooled data, we found a statistically significant effect of physical activity increase while using accelerometers ($SMD=0.43$ (95%CI 0.19 - 0.68), $I^2=1.6\%$, $p=.298$), but not when using pedometers ($SMD=0.22$ (95%CI -0.08 – 0.51), $I^2=48.2\%$, $p=.122$).

Acknowledgements / References