

# Effect of eHealth to increase physical activity in healthy adults over 55 years: A systematic review and meta-analysis

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## Abstract

To estimate the effect of eHealth interventions on increasing physical activity (PA) in healthy adults over 55 years, a systematic review and meta-analysis was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. MEDLINE, Cochrane, Web of Science, SPORTDiscus, and Scopus databases were searched, from inception to February 2020, for experimental studies reporting the effect of eHealth interventions on steps/day, daily moderate-to-vigorous physical activity (MVPA min/day), PA min/week, and MVPA min/week among adults over 55 years. The DerSimonian and Laird method was used to compute a pooled effect size (ES) estimate and the respective 95% confidence interval (95% CI).

Eighteen studies were included in this meta-analysis with adults whose age ranged from 58 to 74.2 years. The interventions lasted between four and 52 weeks. The ES estimates of eHealth interventions on increasing PA were 0.59 (95% CI: 0.15-1.02) for steps/day, 0.49 (95% CI: 0.17-0.80) for daily MVPA, 0.13 (95% CI: 0.01-0.24) for total weekly PA and 0.31 (95% CI: 0.13-0.48) for weekly MVPA. Considering clinical improvements, the mean change difference estimates were an increase of 1616.28 steps/day (95% CI: 386.25-2846.31), 7.41 minutes of daily MVPA (95% CI: 3.24-11.57), 40.54 minutes of total weekly PA (95% CI: -8.71 to 89.79) and 56.35 minutes of weekly MVPA (95% CI: 17.43-95.27). In conclusion, eHealth interventions are effective in increasing PA levels among adults over 55 years, resulting in increased steps/day, MVPA min/day, PA min/week and MVPA min/week.

## Author keywords

eHealth  
healthy aging  
older adults  
physical activity  
telemedicine