primary studies - published RCT

Steps Ahead: Optimising physical activity in adults with cystic fibrosis: A pilot randomised trial using wearable technology, goal setting and text message feedback.

Code: PM36402730 **Year:** 2023 **Date:** **Author:** Curran M

Study design (if review, criteria of inclusion for studies)

Pilot randomised trial

Participants

People with Cystic Fibrosis (CF).

Interventions

Participants were randomly assigned to the intervention (INT) or active comparator (AC). The 12-week intervention consisted of wearable technology (Fitbit Charge 2) which was remotely monitored, and participants set step count goals. Participants were sent a one-way text message once a week over 12 weeks to positively reinforce and encourage PA participation. The AC group received the wearable technology alone. Follow up was assessed at 24 weeks.

Outcome measures

PA, aerobic capacity, lung function, sleep, quality of life and wellbeing.

Main results

Step count increased significantly for the INT group over 12 weeks when compared to the AC group (p=0.019). The INT group had a 28% week-to-week percentage change (Weeks 1-12), while the AC group reduced by 1%, p=0.023. Within group changes demonstrated that VO2 peak (ml/kg/min) significantly increased for the INT group at 12 weeks (24.4 ±7.65 to 26.13 ±7.79, p=0.003) but not at 24 weeks (24.45 ±7.05, p=0.776). There were no significant differences observed for VO2 peak (ml/kg/min) for the AC group. There was no significant effect on lung function, sleep, well-being, or quality of life for either group.

Authors' conclusions

A personalised PA intervention using wearable technology, goal setting and text message feedback increased PA and aerobic capacity in people with CF. Integration of this intervention into usual care may encourage regular PA participation for people with CF.

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See also

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Keywords

exercise; non pharmacological intervention - devices OR physiotherapy; Exacerbation; Respiratory Tract Infections; Respiratory Tract Diseases; Adolescent; Adult; information; non pharmacological intervention - psyco-soc-edu-org; Self-Management; Psychoeducation; Behavioural interventions;