

# Regular exercise with dietary advice linked to better mobility in frail older people

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A program of regular exercise along with expert dietary advice is linked to a reduction in mobility problems among frail older people living in the community, finds a trial published by *The BMJ* today.

The combination of aerobic (walking), strength, flexibility, and balance exercises alongside personalized nutritional counseling reduced mobility disability by 22% over three years.

US and EU data indicate that about 13% of adults aged 70 years and older living in the community have mobility disability, which is linked to poor quality of life, admission to hospital or residential care, and death, as well as greater healthcare costs.

It is therefore important to find safe and effective ways to preserve mobility in older people at risk of further decline.

So researchers designed the SPRINTT trial to find out whether a combined [intervention](#) of physical activity with technological support and nutritional counseling prevents mobility disability in frail older adults compared with education on healthy aging.

Their findings are based on 1,519 men and women (average age 79 years) with physical frailty and sarcopenia (a combination of reduced physical function and low muscle mass) recruited from 16 clinical sites across 11 European countries between 2016 and 2019.

Physical frailty and sarcopenia was defined as having a physical performance battery (SPPB) score of 3 to 9 points (score range 0 to 12, with lower scores indicating poorer physical function) and low levels of muscle mass, but able to independently walk 400 meters in 15 minutes.

In all, 760 participants were randomized to the intervention, 759 received education on healthy aging (controls), and all were monitored for up to 36 months.

The intervention group received twice weekly moderate intensity physical activity sessions at a center and up to four times weekly at home

alongside personalized nutritional counseling. Activity was measured by an actimeter worn on the thigh.

Controls received education on healthy aging once a month and a brief instructor led program of upper body stretching exercises or relaxation techniques.

Among participants with SPPB scores of 3-7 at the start of the trial, mobility disability occurred in 47% assigned to the intervention and 53% controls.

Persistent mobility disability (inability to walk 400 m on two consecutive occasions) occurred in 21% of intervention participants compared with 25% of controls.

SPPB scores increased more in the intervention group than in controls at both 24 months and 36 months (average differences of 0.8 and 1 point, respectively).

Women in the intervention group lost less muscle strength (0.9 kg at 24 months) and less muscle mass (0.24 kg and 0.49 kg at 24 months and 36 months, respectively) than control women, but no significant group differences were seen in men.

The risk of adverse events was, however, greater among intervention participants (56%) than controls (50%).

In a separate analysis of participants with better mobility (SPPB scores of 8 or 9 at the start of the trial), the intervention did not affect the risk of developing [mobility disability](#) and had marginal effects on physical performance.

The researchers acknowledge some limitations. For example, older

adults with important cognitive deficits were not included, and almost all participants were white, so findings may not apply to other ethnic groups.

However, retention and adherence to interventions were high compared with other similar trials, and their use of validated tests in a geographically and culturally diverse group of frail older people across Europe, suggests that results are solid.

As such, they conclude that such an intervention "may be proposed as a strategy to preserve mobility in older people at risk of disability."

This fresh evidence confirms the benefits of structured physical activity in community living [older adults](#), says Thomas Gill at Yale School of Medicine in a linked editorial.

He acknowledges that translating even the best designed trial findings into [clinical practice](#) can be challenging, but says these findings, along with those from another large US trial (the LIFE Study), "provide compelling evidence that mobility in the community can be preserved among vulnerable older people through structured physical activity, with walking as the primary modality."

He notes that the cost effectiveness of the LIFE program "was found to be comparable to that of many commonly recommended [medical treatments](#)."

Confirming these findings in SPRINTT "would further strengthen the case for developing, implementing, and supporting community based [physical activity](#) programs to preserve independent mobility among vulnerable [older people](#)," he concludes.

**More information:** Multicomponent intervention to prevent mobility

disability in frail older adults: randomised controlled trial (SPRINTT project), *The BMJ* (2022). [DOI: 10.1136/bmj-2021-068788](https://doi.org/10.1136/bmj-2021-068788)

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