



*Aging & Chronic Diseases*

## **Treadmill walking after stroke**

Does mechanically assisted walking improve walking speed, distance and participation after stroke?

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Mechanically assisted walking, using devices such as treadmills or gait trainers, allows high-intensity, repetitive, task-specific practice that has the potential to improve walking. Previous reviews comparing treadmill training to overground walking have included trials where the amount of training was not standardised.

A recent systematic literature review by physiotherapists in Brazil and Australia has identified 15 trials involving 673 people who could walk after a stroke. Data from these randomised trials were pooled to determine the overall effects of treadmill training after stroke.



Among people who can walk after stroke, treadmill training improves their walking speed and distance. Specifically, treadmill walking increased walking speed by 0.13 m/s (95% CI 0.08 to 0.19) and distance by 46 m (95% CI 24 to 68) compared with no/non-walking intervention; these effects were largely maintained beyond the intervention. Among people who can walk after stroke, the effect of treadmill walking is the same as or better than the effect of overground walking training for improving walking speed and distance.

The latter is an important finding for people who have had a stroke and who are trying to incorporate walking training into their rehabilitation during lockdown. They can be assured that treadmill walking training is no less effective than overground walking. The added advantages include: it is readily adjustable in terms of speed and incline; it is not weather-dependent; and walking can be ceased anytime without being stranded away from home.

Want to read deeper into this topic? Have a look at the free full text version of this article published in [Journal of Physiotherapy!](#)

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