Electromechanical assisted training improves walking after stroke

Clinical question  Do automated electromechanical-assisted gait training devices improve walking after stroke?

Bottom line  Patients who receive automated electromechanical-assisted gait training in combination with physiotherapy after stroke are more likely to achieve independent walking than patients receiving gait training without these devices. The devices plus physiotherapy increased walking capacity (mean difference 34 metres walking in 6 minutes) but did not increase walking velocity significantly. The results could be interpreted as preventing one patient remaining dependent in walking after stroke for every four treated. This apparent benefit is, however, not supported by all secondary variables (such as walking speed and walking capacity). Therefore, it is still not clear if such devices should be applied in routine rehabilitation, or when and how often they should be used.

Caveat  The results must be interpreted with caution because variations between the trials were found with respect to duration and frequency of treatment, and differences in ambulatory status of patients. Further, some trials (2) tested electromechanical devices in combination with functional stimulation.

Context  Electromechanical-assisted gait training uses specialist machines to assist walking practice, and can reduce dependence on therapists. The machines consist of either of a robot-driven exoskeleton orthosis¹ or an electromechanical solution with two driven foot plates simulating the phases of gait.²

This review contains 8 trials involving 414 participants in 6 countries.

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