

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 orthosis ¹ or an electromechanical solution with two driven foot plates simulating the phases of gait. ²
Cochrane Systematic Review	Mehrholz J et al. Electromechanical-assisted training for walking after stroke. Cochrane Reviews 2007, Issue 4. Art No: CD006185. DOI: 10.1002/14651858.CD006185.pub 2. This review contains 8 trials involving 414 participants in 6 countries.
Pearls No. 60, April 2008, written by Brian R McAvoy	

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners. They are funded by the New Zealand Guidelines Group.

PEARLS provide guidance on whether a treatment is effective or ineffective. PEARLS are prepared as an educational resource and do not replace clinician judgement in the management of individual cases.

View PEARLS online at:

- www.cochraneprimarycare.org



PEARLS

Practical Evidence About Real Life Situations

Colombo G et al. *Journal of Rehabilitation Research and Development* 2000;37:693–700.

Hesse S et al. *Biomedical Engineering* 1999;44:194–201.

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners. They are funded by the New Zealand Guidelines Group.

PEARLS provide guidance on whether a treatment is effective or ineffective. PEARLS are prepared as an educational resource and do not replace clinician judgement in the management of individual cases.

View PEARLS online at:

- www.cochraneprimarycare.org