

# Robot-assisted gait training beneficial for children with cerebral palsy

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Overground robot-assisted gait training (RAGT) using a wearable robot improves gross motor function and gait pattern in children with cerebral palsy (CP), according to a study [published](#) online July 22 in *JAMA Network Open*.

Ja Young Choi, M.D., Ph.D., from Chungnam National University Hospital in Daejeon, Korea, and colleagues examined the effectiveness of overground RAGT in [children](#) with CP using an untethered, torque-assisted, wearable exoskeletal robot in a multicenter, single-blind randomized trial. Ninety children were included; 78 completed the intervention, including 37 and 41 randomly assigned to the RAGT and control groups, respectively. The RAGT group underwent 18 RAGT sessions during six weeks, and the control group received the same number of standard physical therapy sessions.

The researchers found that changes in the RAGT group significantly exceeded those in the control group in the Gross Motor Function Measure 88 (GMFM-88) [total score](#), GMFM dimension E, and GMFM-66 (mean differences, 2.64, 2.70, and 1.31, respectively) and in the Pediatric Evaluation of Disability Inventory-Computer Adaptive Test responsibility domain scores (mean difference, 2.52), indicating independence in daily living at the assessment conducted postintervention.

At the four-week follow-up, significantly greater improvements were seen in balance control and the Gait Deviation Index in the RAGT group versus the control group (mean differences, 1.48 and 6.48, respectively).

"This new torque-assisted, wearable RAGT benefits children with CP, supporting power-as-needed control, motivating children to explore walking, and providing intensive [gait](#) training," the authors write.

**More information:** Ja Young Choi et al, Overground Gait Training With a Wearable Robot in Children With Cerebral Palsy, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.22625](https://doi.org/10.1001/jamanetworkopen.2024.22625)

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