

Eli's Rehab Report

Clinical Rehab Roundup: Combat Infant's Neuromotor Delays With Treadmill Training

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Adults aren't the only patients who benefit from spending time on the treadmill. Infants with neuromotor delays can get on the same trajectory as neurotypical children -- if you intervene early enough, according to new research from the University of Michigan.

UM researcher **Rosa Angula-Barroso** and colleagues studied 15 infants at risk for neuromotor delays, following their development over a two-year period and testing their changes in physical activity and treadmill activity. Parents were trained to assist their children in using the treadmill. Over the two-year window, six of the 15 study subjects were diagnosed with cerebral palsy. Most, but not all, of the patients were walking at the end of the study period. In particular, the researchers studied the frequency in steps and decrease in toe-walking over the two-year period. They found that infants who used the treadmill regularly showed an increase in alternating steps, decreased toe contacts, and increased high-level physical activity. Infants with cerebral palsy showed fewer alternating steps, more toe contacts, and a lower level of physical activity compared to those without -- but their scores were still higher than infants with cerebral palsy who did not receive treadmill therapy.

Critical: Infants' age when they began therapy was the most crucial factor in improving delays. "Both children without a diagnosis and children with cerebral palsy improved the most between 10 months and 18 months of age," the research concludes.

"Early interventions are really, really critical," so families should "work with the physical therapist to see if their kids would be a good candidate for that kind of [treadmill] intervention," said Angulo-Barroso. Therapists should advise patients about treadmill intervention as soon as infants show signs of potential neuromotor delays, she advises.

Next: The study shows a positive correlation between informal treadmill therapy and earlier onset of walking. Angulo-Barroso will next study whether more formal treadmill intervention results in a significant increase in mobility for infants with cerebral palsy and those without.