A Boost from Above

Babies at risk for cerebral palsy learn to crawl sooner and farther with a robot helper than they would on their own platform in the same direction, giving the baby a boost toward where he or she wants to go. In a preliminary 12-week trial, the researchers observed 28 infants at risk for cerebral palsy, as they practiced crawling twice a week with a robot designed to help them move. Infants who received robotic support showed improved motor skills and the ability to orient themselves in space, leading to further problems with movement later in life, says Thaddeus Kocha, a physical therapist and researcher at the University of Oklahoma. The team is now expanding the trial to include more infants, and plans to enroll nearly 80 infants at risk of cerebral palsy. "Our hope is that we can ultimately improve their ability to engage in society and be independent when they grow up," says biomechanics professor Andrew Sag, a co-author of the study.

The SIPP robot supports infants in a crawling position as they learn how to crawl. The robot responds to body movements and provides support to help the child achieve movement. The SIPP robot is designed to be safe and comfortable for the child, and its movements are controlled by the child's own actions, allowing for a natural crawling experience.