

Pediatric Lokomat[®]



Intensive Locomotion Therapy for Children

New horizons in pediatric locomotion therapy

Locomotion therapy supported by an automated gait orthosis on a treadmill has established itself as an effective intervention for improving over-ground walking function in numerous neurological diseases and injuries. With the introduction of the Pediatric Lokomat intensive locomotion training is now also available for small children with cerebral palsy or other neurological disorders such as spinal cord injuries, traumatic brain injury and stroke.



Many small steps may trigger great improvements

The concept of "task-specific learning" based on neuroplasticity suggests that activities of daily living may be trained and improved through numerous repetitions in neurological patients. The Pediatric Lokomat is the first driven gait orthosis for children that automates this process and relieves therapists of the manual labor required during manually-assisted treadmill training. Training sessions can be longer, the therapy is more efficient and it may be expected to achieve desired training goals sooner.

Dr. med. Beat Knecht, Head of Rehabilitation Center Affoltern a.A., University Children's Hospital, Zurich, Switzerland:

„We never thought that locomotion therapy could be elevated to such a level – our first clinical experiences are very positive.“

Innovative assessment, motivation and control strategies

Patient assessment and motivation are very important especially with pediatric patients. For this reason additional functionalities are available to support the therapists. A set of unparalleled patient assessment tools and a direct biofeedback of the patient's own efforts can be used as motivational input during the training. New control strategies allow for adjusting the guidance force to the patient's needs in order to achieve optimal training.

Versatile and easy to use - One Lokomat System fits all

The Pediatric Lokomat is designed to accommodate patients with femur lengths (trochanter to knee joint cavity) of between 210 and 350 mm which means that patient training can start at the age of about 4 years. Special children's harness and cuff sets ensure optimal fit for small patients. Existing Lokomat Systems can be upgraded to be used with the pediatric and standard set of legs. After the upgrade, the different sets of legs can be exchanged by the therapists within a few minutes.

More technical information about the Lokomat System can be found in our Lokomat brochure or on our internet homepage.



Clinical pictures – courtesy of Rehabilitation Center Affoltern a.A., University Children's Hospital, Zurich, Switzerland

Find more information about our cooperation with rehabilitation centers worldwide on our homepage.

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