


NEW

Learning to walk again

Gait Analysis and Gait Training for Rehabilitation



REWALK

zebris

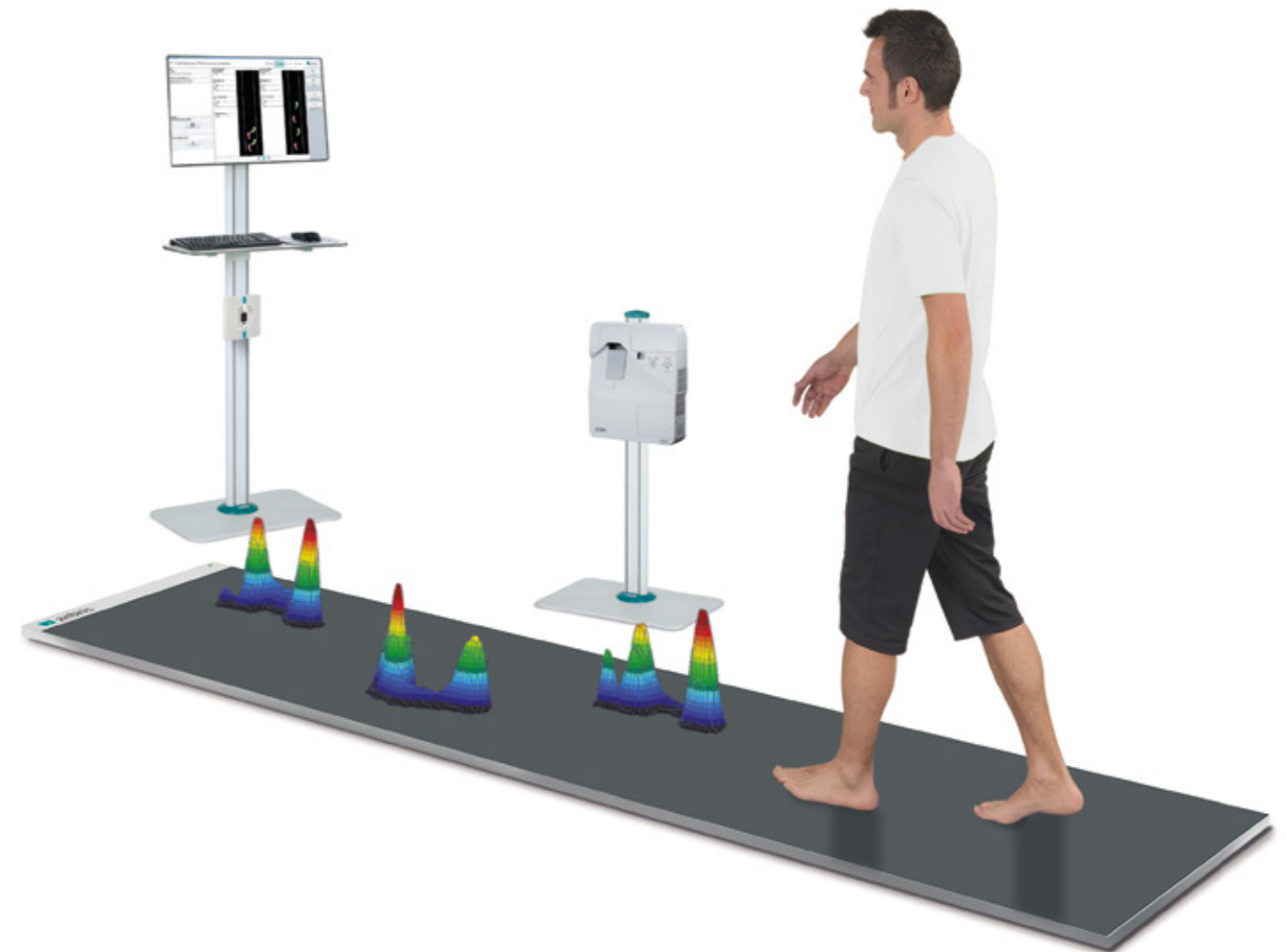
RehaWalk®-Gait Analysis on Treadmill and Walking Range



The zebris RehaWalk® system is designed for the analysis and treatment of gait disorders in neurologic, orthopaedic or geriatric rehabilitation. In addition to a treadmill or measuring platform, RehaWalk® includes a unit for visual cueing through the projection of gait patterns on the treading surface. Virtual feedback training happens simultaneously with the help of a large monitor mounted in front of the treadmill. A module for stance and balance analysis as well as balance training is optionally available.

The treadmill system can be optionally equipped with adjustable handrails and armrests, a safety bar with fall stop or a dynamic weight relief system. For gait support or correction and to increase gait resistance, robowalk® expanders can be installed in the front and rear areas.

Up to four cameras can be operated fully synchronously to record kinematic parameters and for video documentation.

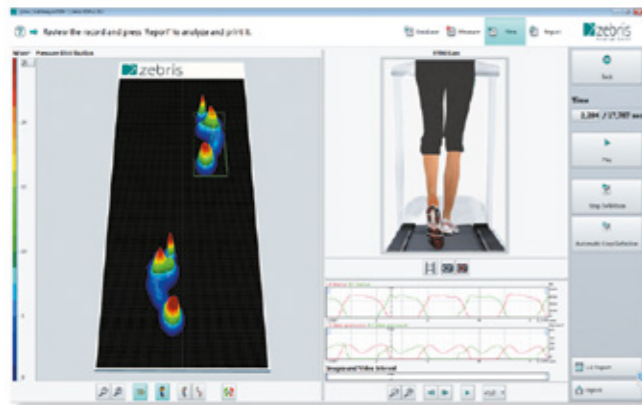


Measurement and evaluation can be done using the intuitive and clearly structured RehaWalk® software.

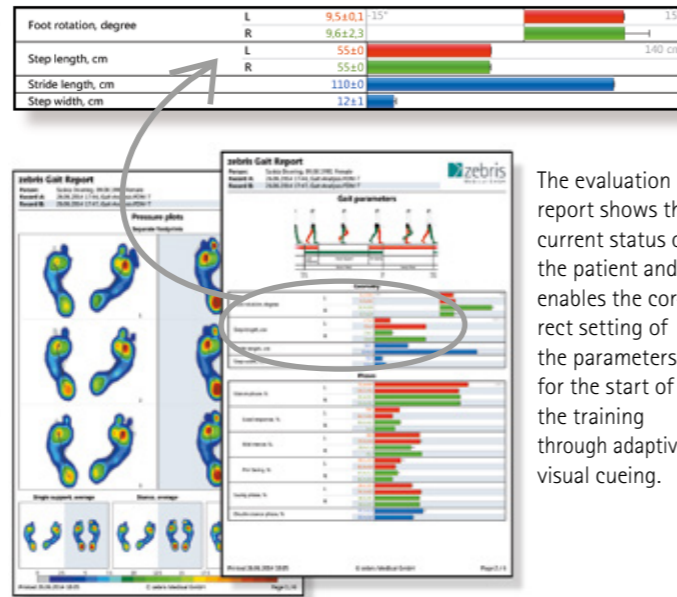
The automatically generated evaluation report contains all important parameters regarding geometry, step phases and timing of human gait. In addition, accurate information is given about the load and pressure conditions under the feet.

RehaWalk®-Gait Training through Visual Step Cueing

1 Gait analysis



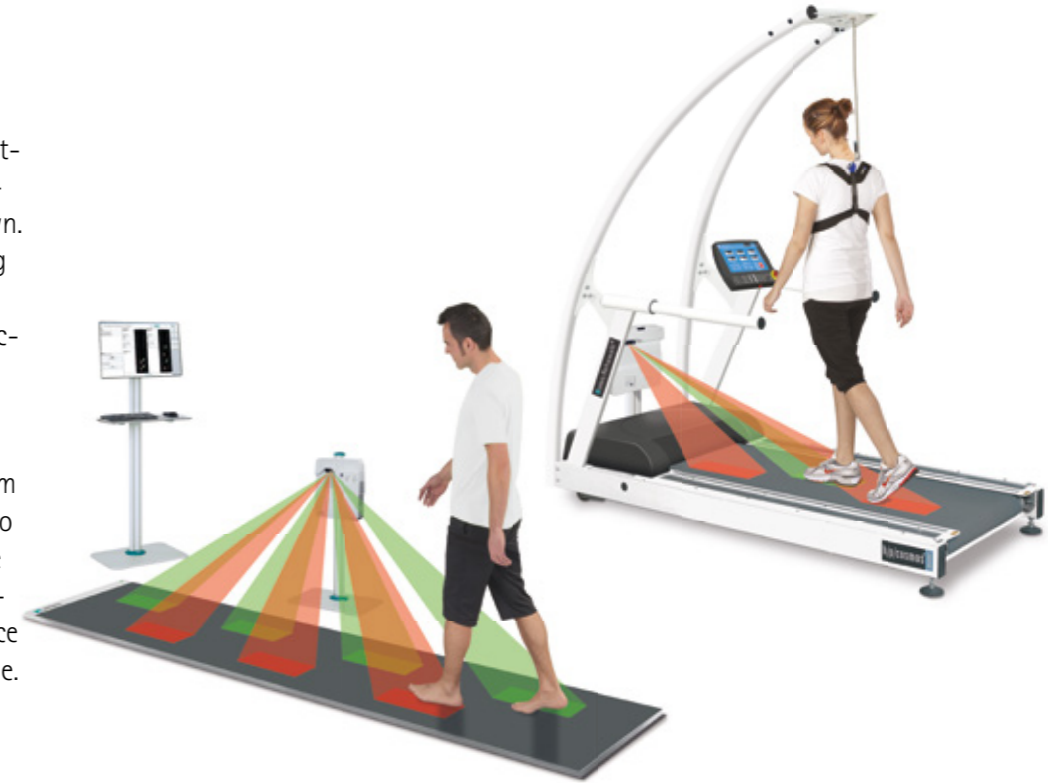
For the initial gait analysis, no preparations on the patient are necessary. The measurement process is displayed in real time on the screen. The individually configurable result report is automatically generated.



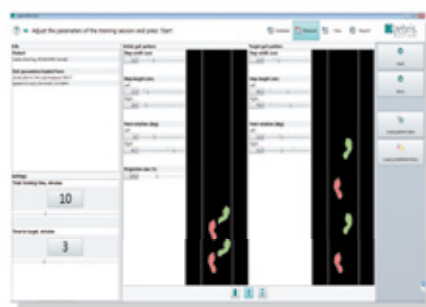
The evaluation report shows the current status of the patient and enables the correct setting of the parameters for the start of the training through adaptive visual cueing.

3 Gait training

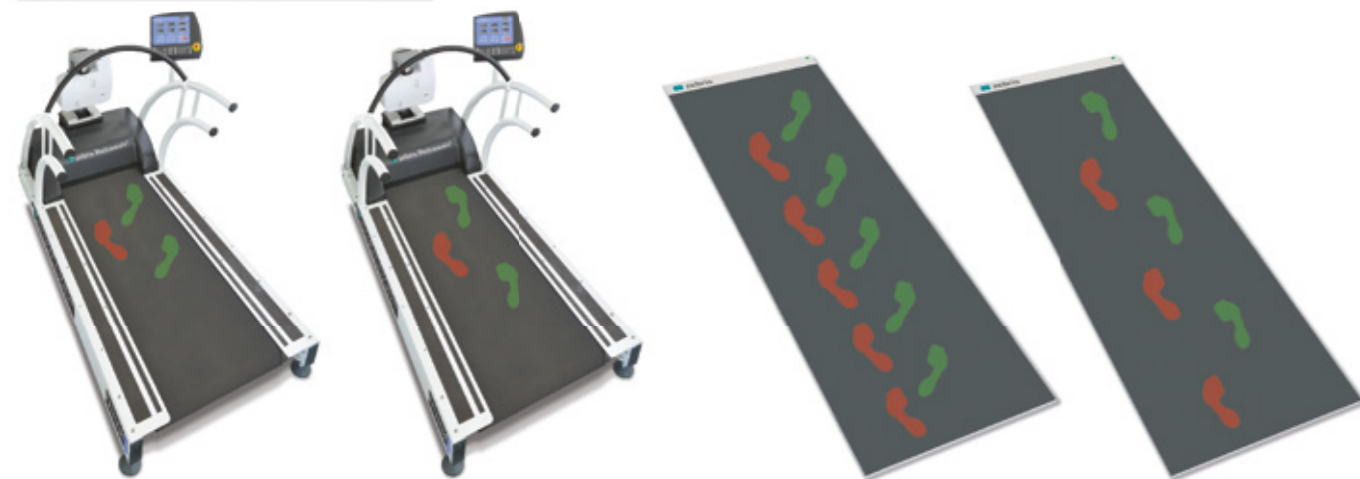
The step projection shows the actual shape of the footprints; alternatively rectangular or oval areas are shown. Throughout the gait training the patient is instructed to position his or her feet as accurately as possible within the projected surface area. Training is possible when using an unweighting system or walking aids and thus also allows for patients who are suffering from severe functional limitations to commence therapy even at an early stage.



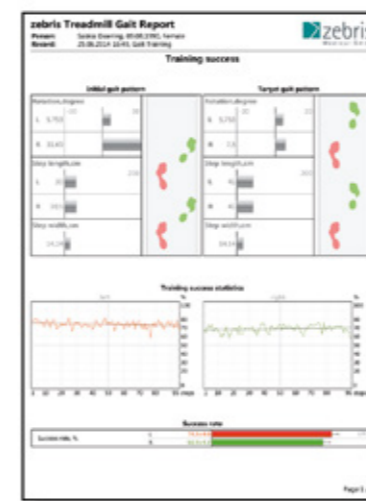
2 Setting the target parameters



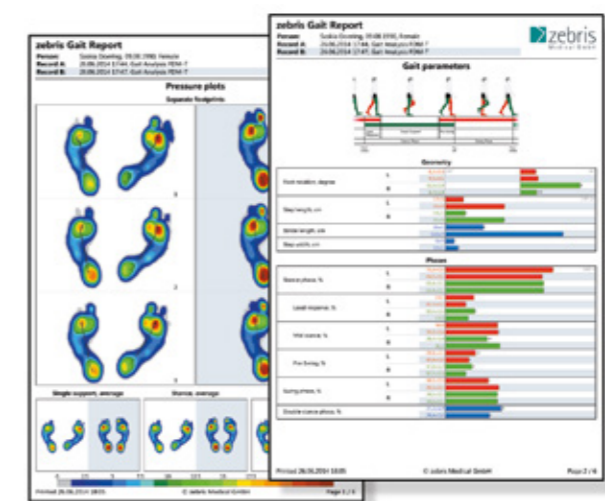
The gait parameters from the analysis in step 1 (step length, step width and foot rotation) are automatically populated and can be individually adjusted according to the training objectives. The values remain constant or gradually approach the target settings during the course of the training.



4 Performance control and comparative analysis



The success report documents the adherence to the target settings. Based on that, the target parameters can be adjusted to the patient's capability.



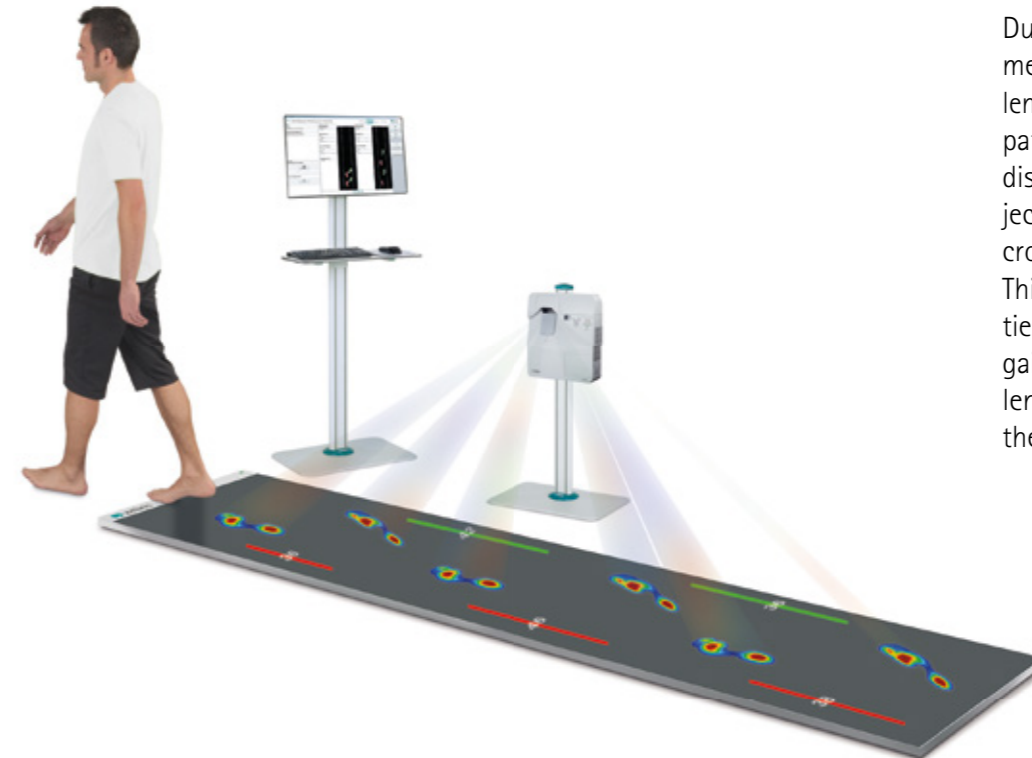
For an optimal therapy control, two gait analyses are compared, e.g. before and after a training period.

Gait- and Coordination Training in Virtual Environment

Gait Training with Direct Feedback



The patient moves in a virtual walking environment, and while observing the footprints performs various tasks which require a continual variation of walking and balancing. Postural control as well as coordination skills are checked and trained as a result. The various modules allow the training to be individually adapted to each patient.



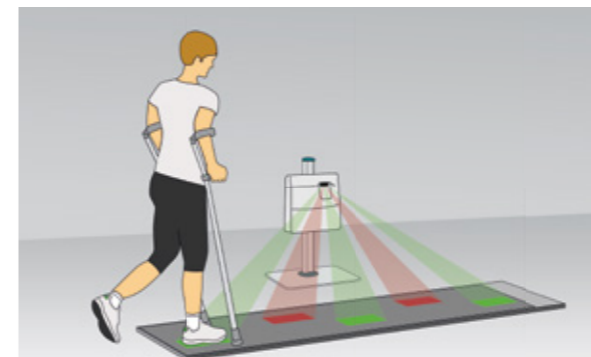
During gait training on the measuring plate, the step length, pressure distribution patterns and gait lines are displayed by means of projection immediately after crossing the plate. This allows gait abnormalities and improvements in gait symmetry and step length to be explained to the patient immediately.



In the virtual walking environment, the patient overcomes or avoids obstacles. Branching off along the way results in new training scenarios arise all the time.



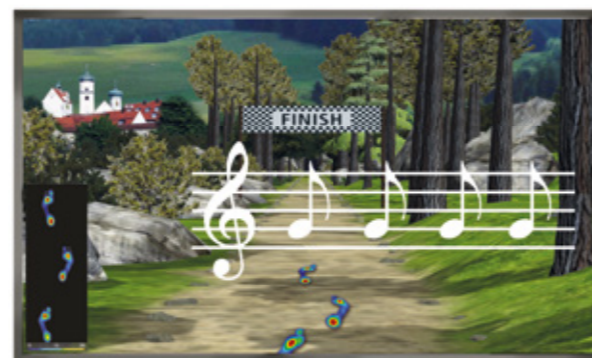
Tree trunks are climbed over or bypassed, it is balanced on stones or footbridges.



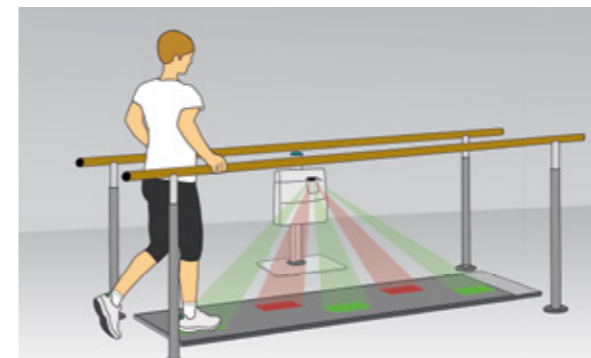
The measuring platform can be entered with walking aids or accessed with a rollator.



Dual-task training promotes motor and cognitive skills at the same time.








The acoustic cueing can be variably adjusted and automatically adapts to the speed of the treadmill.



The system can be integrated into a walking bar and used with weight relief systems.



Technical Data RehaWalk® Systems

	Speed	Running area	Incline adjustment	Sensor area	Number of sensors
 pluto med	0 - 18 km/h	150 x 50 cm	0 - 20 %	102 x 49 cm	3120
				95 x 47 cm	6272
 mercury med	0 - 22 km/h	150 x 50 cm	0 - 25 %	112 x 49 cm	3432
				108 x 47 cm	7168
 quasar med	0 - 25 km/h	170 x 65 cm	0 - 28 %	132 x 56 cm	4576
				135 x 54 cm	10240
 locomotion 150/50 med	0 - 10 km/h	150 x 50 cm	0 - 25 %	112 x 49 cm	3432
				108 x 47 cm	7168
 FDM - 2,4 RW		251 x 60 cm		241 x 56 cm	8360



The systems are approved according to EC Directive 93/42 Medical Devices.

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