

Learning to walk again

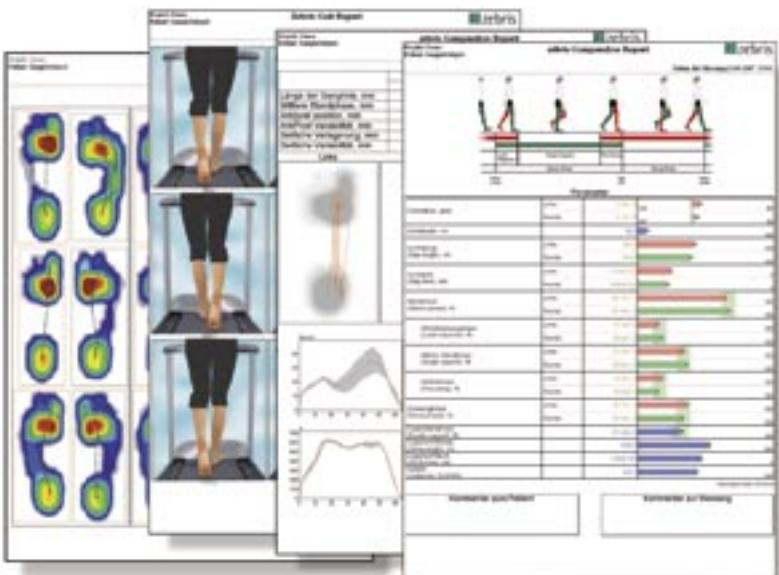
Gait Analysis and Gait Training for Rehabilitation

NEW



Rehawalk®-A new concept for treati

The Rehawalk® includes a gait analysis and training system. The System includes an instrumented treadmill with a pressure sensor matrix, a unit for projecting the step pattern within the platform, a screen for projecting the individual, virtual feedback training and a processing unit. The system also has a stress and balance testing module.



The evaluation report on the gait analysis contains all the important place and time parameters, such as the stance, swing and double-standing phases, step length, step width, foot-rotation angle and a detailed analysis of the force distribution under the feet.

The zebris Rehawalk®System is suitable for the treadmill-supported analysis and treatment of gait disorders for neurological and orthopedic rehabilitation. The application possibilities comprise a dynamic, visual stimulation by means of step projection onto the walking range, as well as a virtual screen environment. The course of the treatment is automatically documented by the system.

ng gait disorders



The product line introduced here is based on the proven h/p/cosmos treadmill systems that can be obtained in different sizes and feature variations. The treadmills can, for example, be equipped with different handrails and a safety arch.

By using an integrated un-weighting system, it is possible to commence the locomotion therapy at an early stage. As a complete system, the h/p/cosmos locomotion 150/50 DE med offers additional adjustable handrails, a wheelchair ramp and therapy seats.



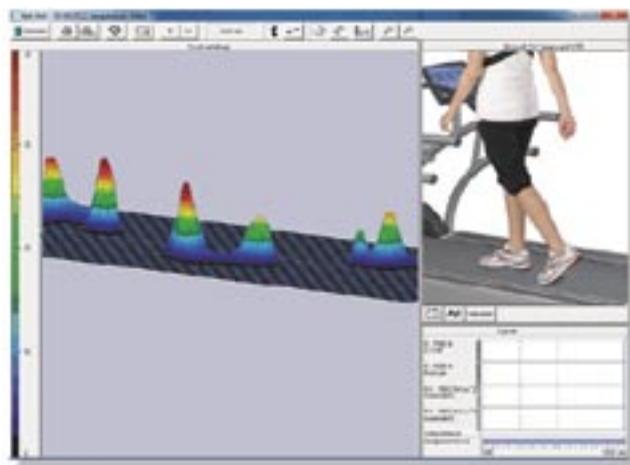
Underneath the belt a pressure sensor matrix is installed with several thousand calibrated, capacitive pressure sensors. The belt movement is compensated such that stable gait and roll-off parameters can be analyzed.

zebris

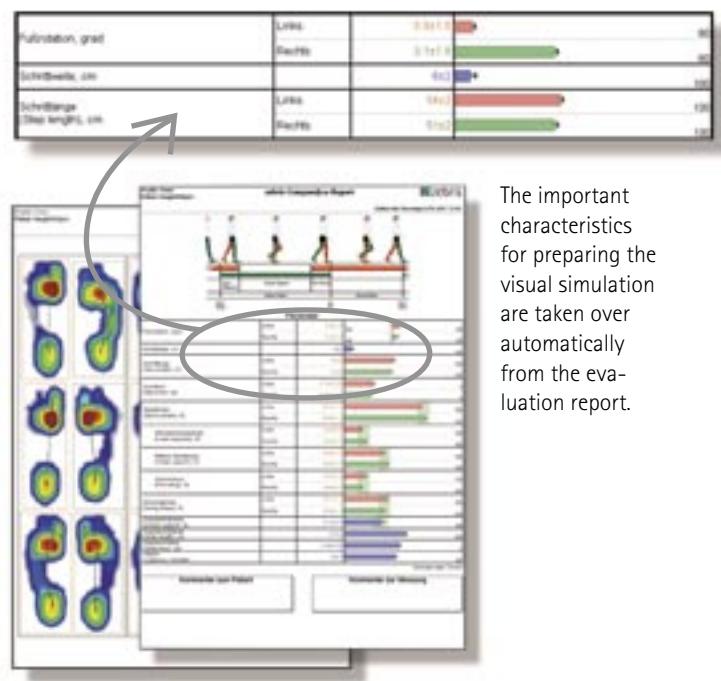
Gait training using dynamic, visual stimuli

Gait analysis

1



The gait analysis is carried out without any preparations to be done on the patient for taking measurements. The measuring process can be observed on the screen in real-time. The report is automatically processed.



Gait training

3

At the beginning or the entire gait training the patient positions his feet as accurately as possible within the projected surface areas. This is possible when walking freely and also when using body-weight support. The projection shows the actual shape of the footprint, or in another presentation, a rectangle or oval shape with the footprint in.



imulation

Setting the target parameters

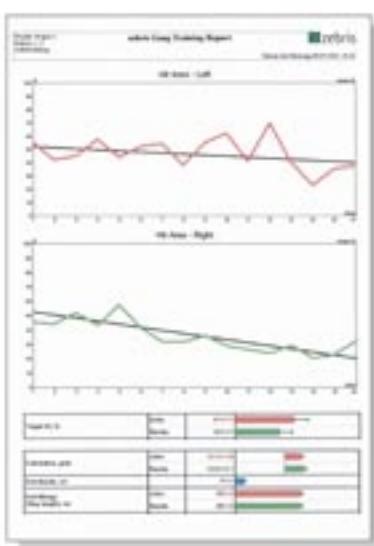
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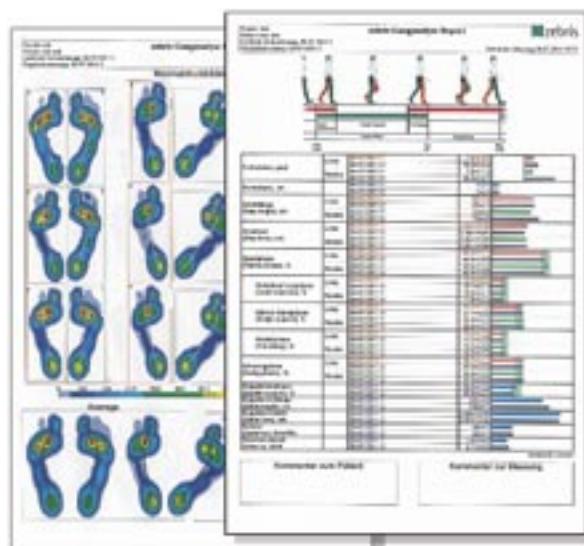
In the settings menu the step length, step width and foot rotation parameters are set according to the training objectives. The values can remain constant during the gait training, or gradually near the target settings during the course of the training.



4



In the success report, the adherence of the target settings is documented. On that basis the target parameters can be adjusted to the patient's capability.



Before and after rehabilitation comparison of gait analysis parameters is easily accomplished in the comparative report.

Gait and coordination training using virtual feedback



The patient moves in a virtual walking environment and whilst observing his own footprints, performs tasks that require a continual variation of his gait and balancing.



Because the gait patterns are constantly varied different groups of muscles are activated. Furthermore, coordination and cognitive skills are in demand.



Controlled training using load feedback



For rehabilitation, after an operation for a hip or knee endoprosthesis, for example, the system enables the load feedback to be given for an adjustable strain limit. Using handrails or adjustable arm supports, the patient is in the position, via acoustic or visual feedback, to unload segments to prevent overload, based on predetermined percentage of body weight.

