

NEW FEATURE

Automatic FPS synchronization triggered by gait cycle detection



Scientific articles have reported clear benefits of the Functional Proprioceptive Stimulations (FPS) on gait performance (Ivanenko et al. 2000, b; Duclos et al. 2014; Barthelemy et al. 2016; Rutović et al. 2019; Tapin et al. 2021).

The new feature of automatic FPS synchronization triggered by gait cycle detection in Vibramoov PRO allows to apply stimulations always synchronized to the gait velocity of the patients. These FPS activates the right muscle groups at the right timing for the 12 channels, provoking a proprioceptive enhancement of walking adapted to the own velocity of the patients.

Indeed, the received signals of the sensors included in the FPS stimulators are computed by algorithms that constantly compute the coordination of the FPS patterns, in order to adapt them in real-time to patient's capacity and fatigue, all long the session.

Patients can thus perform enriched walking training exercises with the right enhanced sensory feedback, promoting their capacity of producing a smooth gait cycle with proper activations and inhibitions of the muscle groups involved .

The FPS gait training help the patient to be more involved and active during the session thanks to a full sensory-motor loop activation.

This Vibramoov PRO automatic gait mode can be used during overground walking, in combination with a treadmill or during a session with robotic gait assistance (exoskeleton).