

Effects of a Lower Limb Strength Training Program on a Seated Robotic Device in Subacute Stroke Patients: a pilot study.

Stroke is defined as a decrease or stop the flow of blood to a part of the brain. From a clinical point of view, it is mainly characterized by a loss of strength in the limbs, difficulty moving part of the face, difficulty in expressing oneself and / or loss of sensitivity in a part of the body. These impairments have a significant functional impact, particularly on the ability to walk.

Strengthening is problematic to perform in this patient population because they often cannot reach the recommended load intensities. The use of a robotic device could promote the recovery of strength, and potentially the ability to move, as it helps patients to make movements with the lower limbs while showing them the strength that they are able to set and give them a goal to achieve.

This research project aims to study, in stroke patients, the effectiveness of group strength training for the lower limbs with a seated robotic device, by comparing it to group training that does not aim specifically a strengthening of the lower limbs.

This randomized controlled study will include patients admitted to a rehabilitation center, in the subacute recovery phase (that is to say, less than 6 months after the stroke). All participants (control and intervention) will have standard individual care. In addition, the intervention group will follow, for 5 weeks, two 1-hour workouts per week to strengthen the lower limbs on a seated robotic device. The participants in the control group, for their part, will have to perform active group exercises for the purpose of functional rehabilitation, but which will not target the strengthening of the lower limbs.

The results of this study will contribute to improving knowledge on the modalities of strength training in subacute post-stroke patients because currently there is

a lack of data in the literature to be able to make recommendations.

Research team

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Duration

18 months

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