

Improvement And Decrease Of Fall Risk In An Individual With Peripheral Neuropathy After Aquatic Therapy Protocol: Case Report

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INTRODUCTION: Peripheral neuropathy is a general term which describes damage of peripheral nerves. Usually presents progressive characteristics with motor and respiratory compromise, and still has not a cure. Although aquatic physiotherapy plays an important role in the treatment of these people, enabling movements which are often not possible on land or offering the possibility to functional movements out of the water. The ICF provides a holistic model to disability issues and is an important tool regarding to functional capacity of body functions and structure, activity, social participation, personal and environmental factors.

OBJECTIVE: Analyze the effectiveness of individual aquatic physical therapy to improve gait pattern and fatigue, reduce number of falls. Study was based on the client complaint, difficulty in gait, frequent falls (one fall per week), and fatigue while walking short distances.

METHOD: According to treatment, follow up a new assessment was performed indicating individual aquatic therapy for three months, twice a week. Goals were set according to International Classification of Functioning (ICF). Individual aquatic therapy for three months, twice a week. Goals were set according to International Classification of Functioning (ICF). Timed Up and Go (TUG), 6-minute walk test, Berg.

	Body Function and Structure	Activity and Participation
Patient Perspective		D4750 ride a bike
		D7601 child-parent relationship
Therapist Perspective	Decrease falls risk	D4500 walk short distance
	B770 Functions related to the gait pattern	
	B7401 Muscles endurance of lower limbs	

Protocol: walk in different directions (front, side and back), deep water exercises, exercises for arms with ball step, static balance (trampoline).



Functional exercise



Exercises for arms with ball



Static Balance



Deep water exercise



Deep water exercise

RESULTS: Significant improvement in gait pattern by visual analysis, only one fall during intervention period. Borg Scale and 6-minute walk test showed an improvement of 44% in walking distance and effort and improvement of 39% in TUG Test. Berg there was no change in the assessed items.

Test	Before Intervention	After Intervention
6MWT	117m	169 m (44%)
Berg	15	16
TUG	15,1	10,47 (39,95%)
Falls	1 per week	None in 3 months

CONCLUSION: A good follow up and evaluation to identify specific goals necessary to improve functional capacity and the best intervention to achieve these goals. In this case report individual intervention was more effective than group to improve functional activities for the person with peripheral neuropathy.