

**Content:** ONLINE IPNFA congress; recorded lectures free for everybody- - - - >1

**We searched and found:** *Peteraitis T and Smedes F. PNF in SIS* - - - - - > 2

News from the WCPT, The website name has been changed - - - - - >3

Patient monitoring, what can be of importance in testing- - - - - > 4

**We searched and found:** *motor learning in stroke* , and spasticity after stroke and task specific training in stroke; 3 abstracts with background information - - - > 6+7

August 2020

# Newsletter IPNFA® research committee

BE AWARE OF the ONLINE  
IPNFA conference with lectures

*What a change in the world since our last newsletter from February. Since the middle of March we are confronted with the COVID-19 pandemic. This pandemic affected also the IPNFA. Courses were cancelled or postponed depending on travel and group building restrictions. Also the annual general meeting (AMG) of the IPNFA needed to be cancelled in its normal manner. Therefore, the IPNFA will organize an online event in October 2020 and we hope that we can gather again next year in Sophia (Bulgaria) and Japan can still host us in 2022. This newsletter has an item about this online event from the IPNFA*

*Furthermore we serve you with several new publications in regards of the PNF-concept a variety of directly PNF based intervention and more general fitting to the PNF-philosophy, like the components of Motor Learning. Furthermore information about assessment and monitoring of patients' progress. We are happy that the scientific world seems to have an steadily growing interest in the efficacy of patient management using PNF*

*I wish a joyful reading. Fred.*

## The Online event from the IPNFA:

## October 12 till October 17 in 2020

### IPNFA Online Congress 2020

This year, due to the Covid-19 pandemic we needed to cancel our AGM in Okinawa - Japan. As we are positive approach specialists and using our sources of reinforcement, we decided to take this opportunity to start with the online events. And, if we have the expected results, we will probably keep doing an online event annually, besides our traditional AGM, in order to help spreading our concept worldwide. For that, we invited some instructors from different countries (4 continents) to record a PNF lecture in a very short period of time. Thanks a lot for all the effort of our colleagues!!!!

The Online Event will happen from October 12th to October 17th when everyday a recorded PNF video class will be released for the participants. So, they can watch at their convenience, considering the different time zones in all countries.

The schedule and the speakers are as follows:

October 12th - **The PNF-concept : a comprehensive rehabilitation approach**

**What are the essential elements of this rehabilitation concept?**

(Fred Smedes – Advanced IPNFA Instructor – The Netherlands)

October 13th - **Sit to Stand: Getting from your Seat to your Feet**

(PNF Program Team from Vallejo - USA) October 14th - **PNF for Neurological and Orthopedic**

**October 14th - PNF for Neurological and Orthopedic Patients with Upper Extremity Impairments and activity limitations**

(José Vicente Martins – Advanced IPNFA Instructor- Brazil)

**October 15th - Spinal Cord injury & PNF...a good match???**

(Fernanda Di Natal – Advanced IPNFA Instructor – Australia))

**October 16th - Treatment approach with PNF for Patient with a neurogenic Dysphagia - case report**

(Benedikt Bömer – Senior IPNFA Instructor- Germany)

At the end of our Congress, on **October 17<sup>th</sup>, at 11h45 (UTC +1)** we'll be Live with our speakers-instructors to answer any questions and interact with the participants.

All the Congress content will be available until October 31st.

Thus, we are all very excited for this new experience, and we hope to have all the IPNFA members with us during the Congress, and also helping us to advertise the event. Let's spread our great concept all over the world!!!!

The research committee went through several databases and used search strategies to update the reference list for the IPNFA website. In the course of these action we found and added several papers to the reference list. this will be available on the IPNFA website after the annual general meeting in October. For now here are some example results, also from “within our own ranks”

**Peteraitis T, Smedes F.**

**Scapula motor control training with Proprioceptive Neuromuscular Facilitation in chronic subacromial impingement syndrome: A case report** *Journal of Bodywork & Movement Therapies* 24 (2020) 165-171 <https://doi.org/10.1016/j.jbmt.2020.03.005>

a b s t r a c t

**Introduction:** Shoulder complaints have high re-occurrence rates and scapular control seems to be a major influencing factor in sub-acromial impingement syndromes (SIS). Scapular dyskinesia disrupts the scapulohumeral rhythm, altering biomechanical loads on the rotator cuff in shoulder movements. As a result, this disturbs the natural healing process. Proprioceptive Neuromuscular Facilitation (PNF) seems to be a promising treatment approach because it has a focus on motor learning. This case report seeks to illustrate the clinical reasoning and feasibility of applying the comprehensive nature of PNF in a patient who was not responsive to standard physiotherapy.

**Case description:** A 47-year-old male, a former professional handball player, was diagnosed with a SIS based upon a rotator-cuff tendinopathy, scapular dyskinesia and degeneration of supraspinatus tendon. The patient presented complaints of right sided shoulder pain in overhead activities and in reaching behind the back.

**Patient management:** PNF-based motor-control training was provided over a period of five weeks. This approach included specified PNF-pattern exercises with specific PNF-facilitation principles and techniques. The results were improvements beyond the minimal clinical important difference and/or minimal detectable change for physical functioning, pain, range of motion, and functional disability of the shoulder.

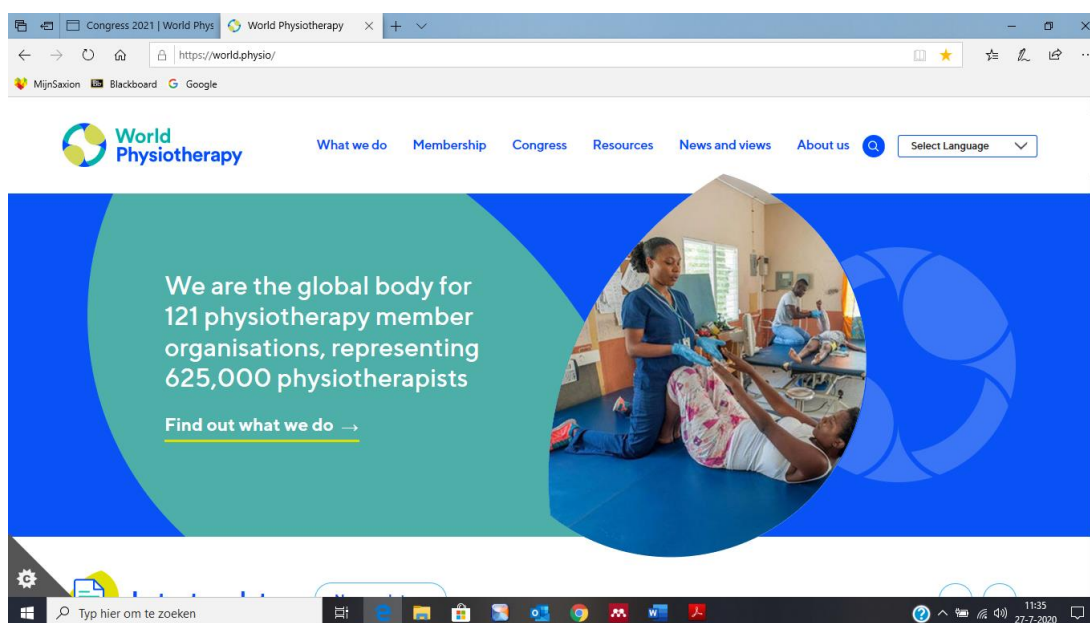
**Discussion and conclusion:** PNF provided an opportunity for motor control training, restored altered movement patterns in the patient's daily life activities. The approach addressed motor learning effects and structural impairments. PNF-patterns have been described as: “mimicking functional activities” from daily life and from sports. In cases where standard strengthening and mobilization exercises are not effective, a specified PNF-based therapy has shown to be a feasible alternative.

# The Name for global physical therapy body has changed

## The WCPT is now: **World Physiotherapy**

World Physiotherapy will be used for all externally-facing communications and materials. World Confederation for Physical Therapy will continue to be used for all legal and governance matters.

The URL for the WCPT is now: <https://world.physio>



These reasons included:

- Brand confusion – WCPT has many examples of inaccuracies in the use of its name, both in writing and verbally – by other organisations and by its member organisations.
- The majority of our member organisations use physiotherapy and physiotherapist to describe the profession and the people who work in the profession.
- WCPT was founded in 1951 by 11 associations. WCPT now has 121 member organisations, representing more than 625,000 physiotherapists.
- **World Physiotherapy** is a clear, simple, and an effective description of the global profession.

## **World Physiotherapy Congress 2021 moves to online event**

**The World Physiotherapy board has considered the options for continuing to plan for a physical event in Dubai in April 2021.**

While recognizing the importance of bringing the global physiotherapy profession together, the board has reflected on a range of uncertainties around COVID-19 (for example, government travel guidance, social distancing, employer and travel restrictions) and the impact on the wider physiotherapy community.

After careful consideration, the board has decided to move to an online event for congress in 2021. More details will follow as planning moves forward.

**Find out more:** <https://world.physio/news/world-physiotherapy-congress-2021-moves-online-event>

We received from Elke Braun a nice notification about a measurement tool which was described in a German Physiotherapy journal. The topic is interesting, since it fits totally in the PNF-Philosophy, specifically on the issues: “Functional approach” and “Treating the total Human being”.

This tool is about the Patient Specific Functional Scale (PSFS) or also known as the Patient Specific Complaints (PSC). Therefore, we like to present you a paper concerning this tool (which also has been used in the paper from Peteraitis & Smedes, 2020 (see page 2)

Monitoring the patients’ progress is essential for establishing proof of effectiveness of our interventions. In that case it is important to see whether the results are real results and meaningful results and so not just an improvement which might still be within the range of mistakes of that measurement. For that the MDC and the MCID are important values.

Stevens A, Moser A, Köke A, van der Weijden T, Beurskens A.

## The patient’s perspective of the feasibility of a patient-specific instrument in physiotherapy goal setting: a qualitative study. *Patient Prefer Adherence.*

2016;10:425-434 <https://doi.org/10.2147/PPA.S97912>

**Background:** Patient participation in goal setting is important to deliver client-centered care. In daily practice, however, patient involvement in goal setting is not optimal. Patient-specific instruments, such as the Patient Specific Complaints (PSC) instrument, can support the goal-setting process because patients can identify and rate their own problems. The aim of this study is to explore patients’ experiences with the feasibility of the PSC, in the physiotherapy goal setting.

**Method:** We performed a qualitative study. Data were collected by observations of physiotherapy sessions (n=23) and through interviews with patients (n=23) with chronic conditions in physiotherapy practices. Data were analyzed using directed content analysis.

**Results:** The PSC was used at different moments and in different ways. Two feasibility themes were analyzed. First was the perceived ambiguity with the process of administration: patients perceived a broad range of experiences, such as emotional and supportive, as well as feeling a type of uncomfortableness. The second was the perceived usefulness: patients found the PSC useful for themselves – to increase awareness and motivation and to inform the physiotherapist – as well as being useful for the physiotherapist – to determine appropriate treatment for their personal needs. Some patients did not perceive any usefulness and were not aware of any relation with their treatment. Patients with a more positive attitude toward questionnaires, patients with an active role, and health-literate patients appreciated the PSC and felt facilitated by it. Patients who lacked these attributes did not fully understand the PSC’s process or purpose and let the physiotherapist take the lead.

**Conclusion:** The PSC is a feasible tool to support patient participation in the physiotherapy goal setting. However, in the daily use of the PSC, patients are not always fully involved and informed. Patients reported varied experiences related to their personal attributes and modes of administration. This means that the PSC cannot be used in the same way in every patient. It is perfectly suited to use in a dialogue manner, which makes it very suitable to improve goal setting within client-centered care.

**Keywords:** goal setting, patient-specific instruments, client-centered care, patient participation

Fleischmann, M., & Vaughan, B. (2019). **Commentary: Statistical significance and clinical significance - A call to consider patient reported outcome measures, effect size, confidence interval and minimal clinically important difference**

**(MCID)**. *Journal of Bodywork and Movement Therapies* (Vol. 23, Issue 4, pp. 690–694). <https://doi.org/10.1016/j.jbmt.2019.02.009>

a b s t r a c t

In healthcare research an intervention may be statistically significant based on quantitative analysis; however, simultaneously it may be relatively insignificant to the health or quality of life of patients affected by a particular condition or disease being treated by the intervention e thus may be interpreted as having low clinical significance. An understanding of statistics is fundamental for evidence informed healthcare. Patient-reported outcome measures (PROMs) direct patients to evaluate aspects of their own health, including quality of life, disability and function. Data obtained from PROMs can be used to demonstrate the impact of healthcare interventions on these elements of a person's quality of life. To interpret outcome measure data for clinical decision making, a clinician must understand the **concepts of statistical significance and clinical significance**. This commentary explores the concepts of patient reported outcome measures (PROMs), their statistical and clinical significance, and explores their relationship with a practical example for the clinician. Limitations of research that only reports p-values and the need to consider effect size, confidence intervals, and **minimal clinically important difference** are also discussed. Together, these concepts can assist the clinician to evaluate whether an intervention may be suitable for their clinical practice.

*Call Them Heroes. Physical Therapists.*

*I am lucky to have such a wonderful Physical Therapy Team.....  
I want to thank them for being there for me...for being incredibly patient and for making me laugh at every visit!!*

The People Need Fun corner   
<https://kindergartenknowledge.com/2017/04/20/call-them-heroes-physical-therapists/>



Kesar TM, Sauer MJ, Binder-Macleod SA , Reisman DS.

# Motor Learning During Poststroke Gait Rehabilitation: A Case Study

JNPT 2014;38: 183–189

DOI: 10.1097/NPT.0000000000000047

**Introduction:** To develop more effective gait rehabilitation strategies, it is important to understand the time course of motor learning that underlies improvements achieved with gait training. The purpose of this case study was to evaluate motor learning through the measurement of within-session and across-session changes in gait biomechanics during the first and sixth weeks of a 6-week clinical gait training program.

**Case Description:** A 47-year-old man with poststroke left hemiparesis participated in the study (15.5 months poststroke, lower extremity Fugl-Meyer score of 12).

**Intervention:** The subject participated in 6 weeks of training with 3 sessions per week, comprising fast treadmill walking and functional electrical stimulation to plantar and dorsiflexors. In one training session during the first and sixth weeks, paretic propulsion and swing phase knee flexion were measured during a pre-test (before the training session), post-test (after the training session), and retention test (48 hours after training).

**Outcomes:** After 6 week of training, the subject's gait speed increased from 0.38 to 0.57 m/s; there was a 55.4% improvement in paretic propulsion and 25% increase in swing phase knee flexion. Examination of change scores revealed greater within-session gains and greater retention during the first versus sixth weeks of gait training for both paretic propulsion and knee flexion.

**Discussion:** We demonstrate the feasibility and advantage of using within- and across-session changes for evaluating motor learning during clinical gait rehabilitation. An understanding of the time course of motor learning that underlies gait training can guide the development of novel strategies and dosing regimens to increase the efficacy of each session of gait rehabilitation.

**Video Abstract available** (See Video, Supplemental Digital Content1, <http://links.lww.com/JNPT/A72>, for more insights from the authors.)

The **P**eople **N**eed **F**un corner ☺ /



<https://i.pinimg.com/originals/08/9f/ec/089fecc4b7d3be0a192a44372e980b6a.jpg>

Li S

## Spasticity, Motor Recovery, and Neural Plasticity after Stroke

(2017). *Front. Neurol.* 8:120. <https://doi.org/10.3389/fneur.2017.00120>

### Abstract.

Spasticity and weakness (spastic paresis) are the primary motor impairments after stroke and impose significant challenges for treatment and patient care. Spasticity emerges and disappears in the course of complete motor recovery. Spasticity and motor recovery are both related to neural plasticity after stroke. However, the relation between the two remains poorly understood among clinicians and researchers. Recovery of strength and motor function is mainly attributed to cortical plastic reorganization in the early recovery phase, while reticulospinal (RS) hyperexcitability as a result of maladaptive plasticity, is the most plausible mechanism for poststroke spasticity. It is important to differentiate and understand that motor recovery and spasticity have different underlying mechanisms. Facilitation and modulation of neural plasticity through rehabilitative strategies, such as early interventions with repetitive goal-oriented intensive therapy, appropriate non-invasive brain stimulation, and pharmacological agents, are the keys to promote motor recovery. Individualized rehabilitation protocols could be developed to utilize or avoid the maladaptive plasticity, such as RS hyperexcitability, in the course of motor recovery. Aggressive and appropriate spasticity management with botulinum toxin therapy is an example of how to create a transient plastic state of the neuromotor system that allows motor re-learning and recovery in chronic stages.

Waddell KJ et al.

## Does Task-Specific Training Improve Upper Limb Performance in Daily Life Poststroke?

Neurorehabilitation and Neural Repair 2017, Vol. 31(3) 290–300

<https://doi.org/10.1177/1545968316680493>

### Abstract

**Background.** A common assumption is that changes in upper limb (UL) capacity, or what an individual is capable of doing, translates to improved UL performance in daily life, or what an individual actually does. This assumption should be explicitly tested for individuals with UL paresis poststroke.

**Objective.** To examine changes in UL performance after an intensive, individualized, progressive, task-specific UL intervention for individuals at least 6 months poststroke.

**Methods.** Secondary analysis on 78 individuals with UL paresis who participated in a phase II, single-blind, randomized parallel dose-response trial. Participants were enrolled in a task-specific intervention for 8 weeks. Participants were randomized into 1 of 4 treatment groups with each group completing different amounts of UL movement practice. UL performance was assessed with bilateral, wrist-worn accelerometers once a week for 24 hours throughout the duration of the study. The 6 accelerometer variables were tested for change and the influence of potential modifiers using hierarchical linear modeling.

**Results.** No changes in UL performance were found on any of the 6 accelerometer variables used to quantify UL performance. Neither changes in UL capacity nor the overall amount of movement practice influenced changes in UL performance. Stroke chronicity, baseline UL capacity, concordance, and ADL status significantly increased the baseline starting points but did not influence the rate of change (slopes) for participants.

**Conclusions.** Improved motor capacity resulting from an intensive outpatient UL intervention does not appear to translate to increased UL performance outside the clinic.