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February 2021

Newsletter IPNFA® research committee



Dear reader, starting with this edition of our newsletter we can announce that we can celebrate now: 10 YEARS OF NEWSLETTERS. The first one came out in March 2011 after that, every 6 months a new edition was presented. We noticed an increase of the amount of information. The first newsletter was only 2 pages, after that, all increased to 5 or 6 pages and the last couple of years we sampled 7 or 8 pages of worthy information. This was all initiated after a discussion within the Research Committee at the meeting of 2010 in Graz, Austria. Seong-soo Hwang and Matthias Schulte suggested the idea during a coffee and lunch moment. Just see how this idea has been developing in one decade.....

*This edition presents: an **impression on online events** and secondly; a **view on a century of Sir Sherrington's work**, the basics for the ideas from Dr Kabat. Furthermore, **several abstracts** with a link to the original publication, 2 study protocols **co-authored by IPNFA®-member: José Vicente Martins!!***

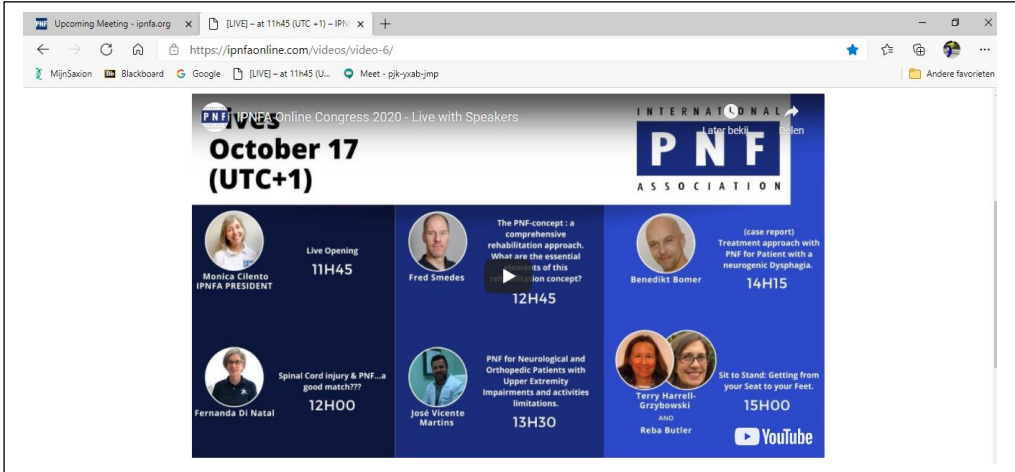
We hope that also this edition finds your appreciation and you enjoy reading about PNF related developments

I wish a joyful reading. Fred.

Education, teaching, courses, meetings in the COVID-19 era

I believe every one of the IPNFA-world will have encountered the limitation and restrictions in relation to the COVID-19 pandemic. For sure we as IPNFA have made the experience with the organization of our annual meeting. Nevertheless, our philosophy with one of its keystones: “positive approach”, showed us that limitations are not just a burden, but can be regarded as an opportunity. An opportunity to innovate, to create, to develop skills and means we did not use or consider seriously before.

Monica and co organized our annual education-day or symposium day this year online in October 2020 with a week of daily lectures. This online event was welcomed by participants from all over the world. Former course participants but also colleagues with just a curiosity for hands-on therapy joined our sessions. Furthermore, students from various countries signed up for participation and have been stimulated and motivated to develop their skills and knowledge after their graduation moment. For us they might be potentially future course participants and PNF colleagues.



Besides the annual general meeting, more and more is going on in the online world, good for PNF

PNF in 2021 - series of webinars in Poland

A few months ago, the general meeting of the IPNFA - Poland association was held. We planned a series of webinars that could show the versatility of the method. The Polish group starts the year 2021 with new ideas related to the promotion of the PNF concept.

Lectures, planned every first Wednesday of the month, will be given by members of IPNFA® - Poland and invited guests, in cooperation with the Polish Physiotherapy Association.



We will propose the following topics this year:

- **"Orthopedic insoles - opinion of a physiotherapist and orthopedic technician. Facts, myths, curiosities"** (Katarzyna Fountoukidis MSc, PT, IPNFA Instructor in cooperation with an orthotic master)
- **"Prevention of trauma in a young athlete"** (Grzegorz Gałuszka MSc, PT, IPNFA Therapist, Instruktor OM Cyriax in cooperation with Monika Wilczyńska MSc, PT, PNF Therapist)
- **"Knee: rehabilitation or operation?"** (Joanna Jaczewska-Bogacka PhD, PT, IPNFA Assistant in cooperation with an orthopedic doctor)
- **"Manual therapy and functional therapy in the treatment of the spine / core stability"** (Joanna Tokarska, MSc, PT, IPNFA Assistant in cooperation with Zbigniew Wroński, PhD, PT, PNF Therapist)

- **"PNF and urogynecological physiotherapy"** (Monika Piwnicka MSc, PT, IPNFA Instructor with cooperation with a specialist in urogynecology)
- **"Short movement patterns in severe disability"** (Grzegorz Biliński PhD, PT, PNF Therapist)
- **"Diaphragm and breathing"** (Anna Riviere, PhD, PT, IPNFA Instructor in cooperation with a specialist in pulmonology)
- **"Can PNF be effectively used in pediatric physiotherapy?"** (Agnieszka Stępień, PhD, PT, IPNFA Instructor in cooperation with Zbigniew Zdrajkowski, MSc, PT, PNF Therapist).
- **"Balance in SM and Parkinson patients"** (Mraz Tomasz, MSc, PT, IPNFA Assistant)
- **"Disorders of the central nervous system - discourse of the young and older master"** (Maciej Krawczyk PhD, PT, PNF Therapist in cooperation Jakub Marciński, MSc, PT, IPNFA Instructor).

We hope our younger and less experienced colleagues will appreciate the PNF concept 😊.

IPNFA® - Poland Group

ABOUT 100 YEARS AGO, SHERRINGTON PRESENTED HIS VIEWS ON THE NERVOUS SYSTEM

Robert E. Burke, Brain (2007), 130, 887- 894 DOI:[10.1093/BRAIN/AWM022](https://doi.org/10.1093/BRAIN/AWM022)

Sir Charles Sherrington's The integrative action of the nervous system: a centenary appreciation

In 1906 Sir Charles Sherrington published *The Integrative Action of the Nervous System*, which was a collection of ten lectures delivered two years before at Yale University in the United States. In this monograph Sherrington summarized two decades of painstaking experimental observations and his incisive interpretation of them. It settled the then-current debate between the “Reticular Theory” versus “Neuron Doctrine” ideas about the fundamental nature of the nervous system in mammals in favor of the latter, and it changed forever the way in which subsequent generations have viewed the organization of the central nervous system.

Sherrington's magnum opus contains basic concepts and even terminology that are now second nature to every student of the subject. This brief article reviews the historical context in which the book was written, summarizes its content, and considers its impact on Neurology and Neuroscience.

Keywords: Neuron Doctrine; spinal reflexes; reflex coordination; control of movement; nervous system organization

de Santana Chagas AC, Wanderley D, Barboza PJM, Martins JVC, de Moraes AA, Morais de Souza FH, deOliveira DA. **Proprioceptive neuromuscular facilitation compared to conventional physiotherapy for adults with traumatic upper brachial plexus injury: A protocol for a randomized clinical trial** *Physiother Res Int.* 2020;e1873. <https://doi.org/10.1002/pri.1873>

Abstract

Background: Traumatic upper plexus injury affects daily living activities performance and participation of individuals. Physical therapy treatment has a fundamental role on functional recovery, but it is still an unexplored and challenging field.

Aim: To develop a protocol to evaluate the efficacy of Proprioceptive Neuromuscular Facilitation (PNF) compared to conventional physiotherapy (CPT group) on functionality and quality of life.

Methods: A committee was formed by four physical therapists to develop the treatment protocol. A Delphi study was carried out in order to quantify the level of agreement. A protocol for a randomized controlled trial was proposed to evaluate the effectiveness of the protocol in improving functionality and quality of life, according Consolidated Standards of Reporting Trials. Participants will be randomly assigned (1:1) to PNF or CPT group and two weekly sessions will be carried out for 12 months post-surgery, with a three month follow up. The main outcome measurements are: upper limb functionality, quality of life, range of motion, muscle strength, tactile sensitivity, and pain, which will be assessed at baseline, on the 6th, 9th, and 12th months post-surgery.

Result: A PNF protocol was developed for traumatic upper brachial plexus injury, consisting of 11 illustrated exercises, three for immediate postoperative and eight for postoperative. Biomechanical objectives, observations, positions of patients and therapists and PNF principles, procedures and techniques have been described. An 80% agreement on all items in the first round of the Delphi study was achieved.


Conclusion: A protocol based on the PNF - concept was developed with the aim of improving the functionality and quality of life of individuals undergoing nerve transfer after traumatic injury to the upper plexus. The detailed description of a physical therapy treatment protocol through an appropriate method will allow its use in clinical practice and in future studies with this population.

“writing is building a legacy”

If you do not want to be forgotten as soon as you are gone, either write things worth reading or do things worth writing. — Benjamin Franklin

More Online events, join Scientifica in India, March 26 and 27, 2021

Organized by our former course participants, Manish Ray



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Category	Early Bird (Till 6th Feb 2021)		Regular (7th Feb to 20th March 2021)	
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Meet the Speakers!
Stay tuned for more!

Jakub Marciński
PT, MSc
IPNFA® Practitioner,
IPNFA® Course Instructor,
IPNFA® Poland Board Member

For Registrations
Contact
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Speakers from the IPNFA® are also scheduled

- **Jakub Marcinski**
- **Fred Smedes**

Physiopedia, a platform for physiotherapist, offers a free membership with limited service and a full membership for a detailed payment. [Physiopedia - universal access to physiotherapy and physical therapy knowledge \(physio-pedia.com\)](https://physio-pedia.com) signing up as a physioplus member or just to their newsletter will bring you several interesting courses, issues, topics, articles and discussions. Just take a look:

[Blended Learning is Effective for Physiotherapy Education | Digital Learning | Article of The Week #25 – Physiospot – Physiotherapy and Physical Therapy in the Spotlight](#)

The World Physiotherapy (former WCPT) will have its annual world conference online from April 9 till April 11



9 – 11 April

World Physiotherapy Congress2021online

EARLY BIRD REGISTRATION DEADLINE: 11 FEBRUARY

Pourahmadi M, Sahebalam M, Bagheri R.

Effectiveness of Proprioceptive Neuromuscular Facilitation on Pain Intensity and Functional Disability in Patients with Low Back Pain: A Systematic Review and Meta-Analysis

Arch Bone Jt Surg. 2020; 8(4): 479-501. Doi: [10.22038/ABJS.2020.45455.2245](https://doi.org/10.22038/ABJS.2020.45455.2245)

Abstract

Background: This systematic review aimed to investigate the effectiveness of proprioceptive neuromuscular facilitation (PNF) training on back pain intensity and functional disability in people with low back pain (LBP).

Methods: Totally, five electronic databases, including PubMed/Medline (NLM), Scopus, Google Scholar, PEDro, and Cochrane Central Register of Controlled Clinical Trials were searched up to October 31, 2018. Clinical trials with a concurrent comparison group (s) that compared the effectiveness of PNF training with any other physical therapy intervention were selected. Publication language was restricted to English language articles. Methodologic quality was assessed using the PEDro scale. The measures of continuous variables were summarized as Hedges's *g*.

Results: In total, 20 eligible trials were identified with 965 LBP patients. A large effect size (standardized mean difference [SMD]=-2.14, 95% confidence interval [CI]=3.23 to -1.05) and significant effect were observed favoring the use of PNF training to alleviate back pain intensity in patients with LBP. Moreover, large effect size and the significant result were also determined for the effect of PNF training on functional disability improvement (SMD=-2.68, 95% CI=-3.36 to -2.00) in population with LBP. A qualitative synthesis of results indicated that PNF training can significantly improve sagittal spine ROM. Statistical heterogeneity analysis showed that there was considerable statistical heterogeneity among the selected trials for the primary outcomes ($I^2 \geq 86.6\%$).

Conclusion: There is a low quality of evidence and weak strength of recommendation that PNF training has positive effects on back pain and disability in LBP people. Further high-quality randomized clinical trials regarding long-term effects of PNF training versus validated control intervention in a clinical setting is recommendable.

Sancheti HOSPITAL Present
PHYSIO TV
Live Webinar Series
Saturday 09th January @ 04:30 PM IST onwards
Dr Jakub Mersinski (PT)
IPNFA Instructor, Poland
TOPIC: "Lumbar Pain Patients Approach - Strategy of Three Dimensional Muscle Control Based on Stages of Motor Control"
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Dr Hutoxi Writer (PT)
Ex Dean of Allied Health Faculty, MUHS, Mumbai
Dr Neeraj Athavale (PT)
Assistant Professor, Sancheti College of Physiotherapy, Pune
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Event Starts on 09th January 04:30 pm India Time
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Jakub, already having experience with online conferences in India



This was January 2021

Pereira de Souza RJ, Brandão DC, Martins JV, Fernandes J, Dornelas de Andrade A

Addition of proprioceptive neuromuscular facilitation to cardiorespiratory training in patients poststroke: study protocol for a randomized controlled trial

Trials (2020) 21:184

<https://doi.org/10.1186/s13063-019-3923-1>

Abstract

Background: Individuals affected by stroke present with changes in cardiovascular and respiratory functions. Cardiorespiratory training (CRT) is one of the classic intervention guidelines for cardiorespiratory fitness. CRT in association with the proprioceptive neuromuscular facilitation (PNF) technique for respiratory muscles could improve the quality of life, cardiorespiratory function and gait parameters of patients after stroke.

Objective: To assess the effects of respiratory and trunk patterns of CRT associated with PNF on the quality of life, gait, oxygen consumption, respiratory muscle strength and thoracic volumes.

Methods/design: A blind, randomized clinical trial with allocation confidentiality will be performed. Forty patients will be randomized into four groups: CRT-lower limb (LL) plus PNF; CRT-LL and respiration; CRT-upper limb (UL) plus PNF; or CRT-UL and respiration. Individuals will be evaluated at three different times (pretreatment, after 20 days of treatment and 1 month after the end of treatment). The treatment protocol consists of respiratory exercises, 30 min of CRT (cycle ergometer) and then repetition of the respiratory exercises, performed three times a week over a period of 20 days. Primary outcome measures are quality of life, gait, balance, peak oxygen uptake and rib cage compartment volumes. As secondary outcomes, respiratory function and maximal inspiratory and expiratory pressures will be measured.

Discussion: The association of PNF with CRT may be a viable and accessible alternative to increase cardiorespiratory function in patients with stroke.

Trial registration: ClinicalTrials.gov, [NCT03171012](https://clinicaltrials.gov/ct2/show/study?term=NCT03171012). Registered on 6 June 2017.

Keywords: Clinical trial, Stroke, Breathing exercises, Gait, Respiratory muscles, Rehabilitation

The South Korean, Seoul team

organized online conferences once a month since July 2020, after the onset of the Corona pandemic.

Every conference was attended by 100 PTs or OTs.

The content consisted of basic information for PNF, and clinical tips for treatment in clinics.



Marianne Heidmann

News from German „PNF expert club“

A new group of 10 German PNF experts founded the
„PNF Fachgesellschaft Deutschland/IPNFA®

In August- 22-2020 the founders came together to vote on the foundation of the association, its board and its rules and regulations.

President is: Mr. Benedikt Bömer
Vice president is: Mr. Ulrich Engelbach
Treasurer is: Mrs. Sissi Tiedemann

Goals of the association:

- Developing PNF standards for basic and postgraduate PNF courses
- Promotion and Facilitation of lecturers education level
- Organization of regular meetings for further qualification of the members
- Working on unique teaching materials for PNF courses
- Promotion of knowledge exchange within the members

First working meeting will be held on 6th of March 2021. It will be in an online mode.
The association is in close connection to the IPNFA, as 9 out of 10 founders are IPNFA members.
Synergistic effects may take place to support the IPNFA as well as national belongings.



NEW IPNFA® instructors:
Byungki Lee from Korea

Jakub Marciński from Poland.

ICC was organized in Warsaw, Poland (I week 23-28.08.2020, II week 22-27.09.2020) with Marianne and Agnieszka as instructors.

The course took place in full sanitary regime, with the participation of patients.

It wasn't easy, but we made it!