

WEDNESDAY 22 MAY 2019

Pre-congress workshop

The pre-congress exist out of three, ninety minutes rounds. During each round you can select one out of three workshops which you would like to join. In the end you should have three workshop round of ninety minutes selected.

Please note that the additional costs for participating at the pre-congress are € 100,00 on top of the normal registration fee.

13:00 - 14:30 | Round 1

Room: 0.2/0.3 | Management of gait impairments after stroke | Prof. A. Geurts, Prof. J. Buurke. Dr. J. Nonnekes, Dr. J. Fleuren

The management of gait impairments after stroke is complex and shows a large variation across nations and institutions. Practice variation is often based on differences in (team) expertise, (team) experience, available medical-technical possibilities (e.g. functional electrical stimulation, focal spasmolysis, ankle-foot surgery), resources and reimbursement. During this interactive workshop, we will provide a profound insight into the underlying causes of gait impairments after stroke and show how this knowledge can contribute to selecting the optimal treatment strategy, taking into account patient preferences and needs. The role of instrumented gait analysis will be discussed and individual examples of treatment results will be given. Overall, a practical, hierarchical approach to the management of gait impairments after stroke will be advocated with a focus on medical-technical interventions in order to reduce variation in clinical practice and offer patients the best functional perspective.

Learning objectives workshop:

- To gain insight into the underlying causes of gait impairments after stroke
- To gain insight into how instrumented gait analysis can contribute to understand individual gait impairments
- To learn how to follow a hierarchical approach to correcting gait impairments after stroke with emphasis on medical-technical interventions

Room: 0.4 | Integrating musculoskeletal and neurological clinical reasoning to optimize the assessment and treatment of the post-stroke painful shoulder | Dr. L. De Baets, Dr. A. Van Bladel

In this workshop, the latest information regarding state-of-art assessment and rehabilitation of the post-stroke painful shoulder will be presented and discussed based on several case-studies. The workshop will focus on how the integration of musculoskeletal information can be of additional value in the upper extremity assessment and rehabilitation of stroke patients with shoulder pain or dysfunction.

Learning objectives workshop:

- To give an update on the biomechanical and neurological background of shoulder functioning
- To provide a clinical reasoning framework for integrated musculoskeletal and neurological clinical reasoning with regard to shoulder pain after stroke
- To provide participants with practical skills to perform a clinical upper extremity assessment to direct

treatment goals in persons with post-stroke shoulder pain

- To provide participants with practical skills for the rehabilitation of persons with post-stroke shoulder pain

Room: 0.5 | Using mixed methods in exploring the efficacy of technology and implementing self-management in stroke | Dr. L. Tedesco Triccas & Dr. S. Tino Kulnik

This interactive workshop will first focus on gaining knowledge about mixed methodology involving the combination of qualitative and quantitative methods and data and its integration into stroke clinical settings and research. An example of when mixed methods were integrated into a randomized controlled trial involving robot therapy and non-invasive brain stimulation in stroke will be presented.

Workshop participants will then be presented with a research question around implementing a team-based self-management approach in neuro-rehabilitation. Participants will be invited to draft a mixed-methods study design addressing the question. We will discuss thoughts and ideas and present a completed mixed-methods study that addressed the same question.

14:30 - 16:00: Round 2

Room: 0.2/0.3 | Cochrane Reviews in Neurorehabilitation – state of the art and future directions | Prof. J. Merholz, Prof. B. Elsner & Prof. G. Verheyden

This workshop held by members of the World Federation of Neurorehabilitation (WFNR), partner of Cochrane Rehabilitation (CR) shows how state-of-the-art Cochrane Reviews are conducted. It highlights issues like effective and efficient search for literature, performing step- by step meta-analysis in Cochrane's ReviewManager 5.3 and emerging analyses like network meta-analysis.

Learning objectives workshop:

- to explain the role of Cochrane Groups, Cochrane Rehabilitation Field (CR) and the partnership with WFNR in the field of neurorehabilitation
- to perform effective literature search
- to perform pairwise meta-analyses
- to know why, when and how conducting subgroup and sensitivity analysis
- to plan and design Network meta-analysis

Room: 0.4 | Functional Electrical Stimulation (FES) for improving mobility in MS and other neurological conditions. The evidence, future trends and practical application | Dr. P. Taylor & Prof. J. Burridge

Functional Electrical Stimulation (FES) is a means of producing functional movement in paralysed or weak muscles for individuals with damage to the brain or spinal cord. It is most commonly used for correction of dropped foot in conditions such as multiple sclerosis and stroke and in recent years has become a standard treatment in rehabilitation. This workshop will review the evidence for FES for dropped foot and discuss developments that may improve its effectiveness. We will also introduce ACPIN's initiative to produce best practice guidelines for the clinical provision of FES. We will demonstrate some FES applications and there will an opportunity for participants to apply FES for correction of dropped foot, improving hip flexion or extension and other applications with each other. Please bring shorts or other suitable clothing to allow the applications of electrodes. Please be aware that people who have implanted electronic devices, are pregnant or have epilepsy should not receive FES.

Participants will gain an overview of the clinical evidence for FES in MS and other neurological conditions and its impact on its users. They will receive an introduction to the clinical implementation of FES including selection criteria, clinical pathways and an introduction to the different methods that can be used to optimise its effect. They will experience the direct effect of FES, giving them an insight to the experience of the FES user.

Room: 0.5 | “I am not suddenly going to start now am I?” Overcoming challenges to physical activity | Prof. F. van Wijck

A sedentary lifestyle is common amongst people with stroke and other long term neurological conditions (LTNC) – including those with adequate mobility. This tends to have a negative impact on health, function, activity, participation and well-being. Therefore, the goal of reducing sedentary behaviour and increasing physical activity should be central to neurorehabilitation. Supporting such behaviour change requires an in-depth understanding of each individual’s barriers and motivators, and a good knowledge of strategies to overcome these. This workshop, intended especially for practitioners, will:

- identify common barriers and facilitators to changing sedentary behaviour and physical activity in people with stroke and other LTNC,
- summarise behavioural change theory underpinning practical strategies to overcome common barriers to behaviour change,
- discuss the application of behaviour change strategies to enhancing physical activity and reducing sedentary behaviour in people with LTNC, using a number of case studies from across the care pathway.

Following this workshop, delegates will be able to:

- describe common patterns of sedentary behaviour and physical activity amongst people with stroke and other LTNC
- identify common barriers and facilitators to changing patterns of physical activity, specifically amongst people with stroke and other LTNC
- discuss, justify and apply behaviour change strategies to case studies of people with LTNC, with the aim to reduce sedentary behaviour and increase physical activity.

16:00 - 16:30 Coffee break - Lobby

16:30 - 18:00: Round 3

Room: 0.2/0.3 | Mirror therapy | Dr. C. Dohle

Room: 0.4 | Designing the future: translating recovery in animal models into human rehabilitation | Prof. dr. A. Dromerick, Dr. D. Edwards, Dr. T. Jones

This translational neuroscience workshop will address findings from animal models of stroke recovery and how they inform future human studies of Neurorehabilitation. The types, strengths, and weaknesses of rodent stroke recovery models will be presented. Approaches to translating experimental conditions from the rodent model into the clinical setting will be presented. Translating repetitive motor training paradigms into forms motivating to participants will be discussed

Learning objectives workshop:

- Learn about rodent models of stroke, and how neuroanatomy and vascular anatomy differ between rodents and humans
- Describe findings from animal models with basic and clinical relevance to Neurorehabilitation
- Discuss clinical research techniques to translate important animal experiments into human studies.
- Discuss translating motor training paradigms into human treatment programs.

Room: 0.5 | Post-stroke fatigue: behavior and physiology | *Dr. A. Kuppuswamy*

Fatigue is a major problem in many neurological illnesses, however there is very little known about the underlying mechanisms that mediate fatigue. In this workshop I will be discussing emerging data from stroke populations that is starting to provide insights into why stroke survivors suffer from fatigue sometimes years after their stroke. I will be discussing results from behavioral studies and brain stimulation studies in non-depressed, highly functioning stroke survivors and present to you a framework within which we can understand post-stroke fatigue. I will also discuss about an ongoing neuromodulation based interventional trial for fatigue in stroke survivors.

Learning objectives workshop:

- Identify and understand the presentation of fatigue in stroke survivors
- Know the behavioral and neurophysiological correlates of post-stroke fatigue
- Understand the mechanistic framework of post-stroke fatigue

THURSDAY 23 MAY 2019

09.30-10.00 | Auditorium 2

Welcome & Opening | Prof. Dr. G. Kwakkel

10.00-11.00 | Auditorium 2

Healing, time, and opportunity: Critical periods and brain recovery | Prof. Dr. A. Dromerick

Chair: Prof. Dr. G. Kwakkel

11.00-11.30 | ExpoFoyer

Coffee break & Exhibiton

11.30-13.00 | Young Scientist Competition | Auditorium II

Chair: T.B.C.

11.30-11.45 **Interventions for preventing falls in people after stroke** | Msc. S. Denissen

11.45-12.00 **Position-cortical coherence as a marker for somatosensory integrity early post-stroke, a prospective cohort study** | Msc. S. Zandvliet

12.00-12.15 **Predicting Fugl-Meyer scores from hand motion analysis** | Dr. B. Rubio Ballester

12.15-12.30 **A systematic review on kinematic assessments of upper limb movements after stroke** | Msc. A. Schwarz

12.30-12.45 **Is there a dose-response relationship of robotic-assisted therapy in motor rehabilitation of the upper extremity after stroke?** | J. Stuermer

12.45-13.00 **Longitudinal recovery of manual dexterity after stroke: brain lesion location a key predictor of poor precision grip force control** | G.V. Pennati

11.30-13.00 | Focused Symposium | Room 0.2/0.3

Technology for measurement of manual dexterity impairments in stroke | *Chair: Dr. P. Lindberg*

Speakers: Dr. P. Lindberg, Dr. L. Dupin, Dr. A. Roby-Brami en Dr. J. Hermsdörfer

11.30-13.00 | Focused Symposium | Room 0.4

Clinical effectiveness of Digital Neuro-Interventions for patients with stroke or dementia and language impairments: behaviour and brain factors explored and exploited | *Chair: Prof. Dr. A. Leff*

Speakers: Dr. Z. Woodhead, Ms. V. Fleming, Dr. C. Doogan, Prof. J. Crinion

11.30-13.00 | Invited Lecture and oral abstract presentations | Room 0.5

Chair: P. Feys

11.30-12.00 **Exercise and multiple sclerosis – recent advances** | *Dr. U. Dalgas*

12.00-12.15 **The attitudes of people with progressive MS to the use of mobile applications for symptom monitoring and sharing information with healthcare professionals** | Msc. C. Holland

12.15-12.30 **Test-retest reliability of cognitive-motor interference assessments in walking with various task complexity in persons with Multiple Sclerosis** | Msc. R. Veldkamp

12.30-12.45 **Perceptions of exercise - what moves people with multiple sclerosis to exercise?** | Msc. M. Hensman

12.45-13.00 **Boost – a self-management programme for people with multiple sclerosis** | H. Gaskell

11.30-13.00 | Invited Lecture and oral abstract presentations | Room 0.8

Chair: Dr. C. Dohle

11.30-12.00 **Title T.B.C.** | *Dr. C. Dohle*

12.00-12.15 **Longitudinal changes in upper extremity kinematics during the first year post stroke** | M. Alt

Murphy

12.15-12.30 **Extending the proportional recovery rule for the upper paretic limb after stroke** | Msc. R. Vliet

12.30-12.45 **Interhemispheric functional connectivity and mirror movements in chronic hemiparetic stroke patients** | P. Lindberg

12.45-13.00 **Individuals with chronic hemiparetic stroke can accurately identify elbow flexion torques within each arm** | N. Cai

13.00-14.00 | **ExpoFoyer**

Lunch & Exhibition

13.00-14.00 | **Lunch symposium IPSEN | Room 0.9**

Speakers t.b.c.

14.00-14.30 | **ExpoFoyer**

Poster Visit

14.30-16.00 | **Best Poster Competition | Auditorium II**

Chair: T.B.C.

14.30-14.40 **Effectiveness of botulinum toxin treatment for upper limb spasticity after stroke over different ICF domains: a systematic review and meta-analysis** | Msc. A. Andringa

14.40-14.50 **Evoked brain responses to robotic wrist manipulations reflect the severity of sensory impairments in patients with stroke** | Dr. J. Kordelaar

14.50-15.00 **Effect of trunk training on body function and activity post stroke: a systematic review and meta-analysis** | Msc. L. Thijs

15.00-15.10 **Home-based Constraint-Induced Movement Therapy in chronic stroke patients: a pilot TMS study** | Dr. S. Borsato

15.10-15.20 **Minor stroke, serious balance problems?** | J. Roelofs

15.20-15.30 **Running-induced visuospatial memory improvement in MS: a stronger functional embedding of the hippocampus in the default-mode network?** | M. Huiskamp

15.30-15.40 **How does upper extremity Fugl-Meyer motor score relate to resting-state EEG in chronic stroke? A power spectral density analysis** | Msc. M. Saes

15.40-15.50 **Relationship between a 10m & 6min walk test ratio and age in stroke patients** | Dr. P. Philipp

15.50-16.00 **Cortical activation during submaximal contractions of a hand muscle after mild traumatic brain injury** | R. Prak

14.30-16.00 | **Focused Symposium | Room 0.2/0.3**

Sensorimotor Impairments Post Unilateral Brain Injury | *Chair: Prof. Dr. J. Dewald & Dr. N. Gurari*

Speakers: Prof. dr. J. Dewald, Dr. R. Sainburg, Prof. Dr. F. van der Helm

14.30-16.00 | **Focused Symposium | Room 0.4**

Making training better: Incorporating fundamental motor control and learning principles into rehabilitation interventions | *Chair: Dr. D. Piscitelli*

Speakers: Prof. Dr. M. Levin, Dr. D. Piscitelli, Dr. A. Turolla

14.30-16.00 | **Focused Symposium | Room 0.5**

Trending topics in MS rehabilitation | *Chairs: Prof. Dr. P. Feys & Dr. U. Dalgas*

Speakers: Dr. L. Hvid, Drs. L. Moumdjian, Drs. F. Van Geel, Drs. J. Raats

14.30-16.00 | Invited Lecture and oral abstract presentations | Room 0.8

Chair: J. Liepert

14.30-15.00 **Title T.B.C.** | Prof. Dr. F. Hummel

15.00-15.15 **Neurofeedback for central neuropathic pain treatment: mental strategies used for successful neuromodulation** | K. Anil

15.15-15.30 **The role of cerebellar transcranial direct current stimulation on balance and mobility in multiple sclerosis patients: a pilot study** | Msc. A. Baroni

15.30-15.45 **Cathodal direct current stimulation over contralesional m1 may be detrimental to leg motor control in more severely impaired chronic stroke patients** | Msc. W. Staring

15.45-16.00 **Differentiating the primary motor pathway: premotor contribution as independent predictor of upper limb impairment post stroke** | L. Boccuni

14.30-16.00 | Invited Lecture and oral abstract presentations | Room 0.9

Chair: A. Leff

14.30-15.00 **Title T.B.C.** | Dr. A. Kuppuswamy

15.00-15.15 **The influence of psychological factors and mood on the course of participation up to four years after stroke** | J. de Graaf

15.15-15.30 **Prospectively classifying community walkers after stroke: who are they?** | M. Mulder

15.30-15.45 **Caregiver mediated exercises with e-health support for early supported discharge after stroke: conclusions of the care4stroke trial** | J. Vloothuis

15.45-16.00 **Aneurysmal Subarachnoid Hemorrhage: Long-term functional results** | V. Dávalos Yerovi

16.00-16.30 | ExpoFoyer

Coffee break & Exhibition

16.30-17.30 | Auditorium 2

Chair: Dr. J. Mehrholz

Changing approaches to rehabilitation of the upper limb after stroke | *Prof. Dr. N. Ward*

17.30-19.30 | ExpoFoyer

Welcome reception

19.00-20.00 | Auditorium 2

ACPIN Annual General Meeting

FRIDAY 24 MAY 2019

07.30-08.30 | Room 0.8

BSNR Annual General Meeting

08.30-09.30 | Auditorium 2

The exercise prescription for Parkinson's disease | Prof. Dr. D. Corcos

Chair: Dr. E. van Wegen

09.30-10.00 | ExpoFoyer

Coffee break & Exhibiton

10.00-11.30 | Focused Symposium | Auditorium II

Is it any wonder no one ever implements evidence-based practice?? | Chairs: Dr. Connell & Dr. E. Lynch,

Speakers: Dr. T. Lannin, Prof. Dr. P. Logan, Prof. Dr. N. Ward

10.00-11.30 | Focused Symposium | Room 0.2/0.3

Neurophysiological correlates of upper limb sensorimotor function and recovery in stroke measured by electroencephalography and magnetoencephalography | Chair: Dr. L. Tedesco Triccas

Speakers: Dr. K. Laaksonen, Dr. L. Tedesco Triccas, Drs. M. Saes, Prof. A. Guggisberg

10.00-11.30 | Focused Symposium | Room 0.4

IISART: Optimizing the use of technology in upper limb and gait rehabilitation | Chair: Dr. F. Steenbrink

Speakers: Dr. A. Esquenazi, Dr. I. Jakob, Dr. F. Steenbrink

10.00-11.30 | Invited Lecture and oral abstract presentations | Room 0.5

Chair: M. Levin

10.00-10.30 Evidence for an increased dependence on contralesional corticoreticulospinal pathways: maladaptive plasticity following a unilateral brain injury? | Prof. Dr. J. Dewald

10.30-10.45 Validity and reliability of a new method for detection of spasticity in the lower limb | G.V. Pennati

10.45-11.00 Functional effects of treatment with botulinum toxin and subsequent stretching of the hip adductors in patients with hereditary spastic paraplegia | Msc. B. Lith

11.00-11.15 AbobotulinumtoxinA injections in shoulder muscles: results from a real world (ulis-ii) and phase iii study | T. Lejeune

11.15-11.30 Goal setting for botulinum toxin injections: impact of the upper limb international spasticity (ulis) programme | Dr. S. Ashford

10.00-11.30 | Invited Lecture and oral abstract presentations | Room 0.8

Chair: T. Jones

10.00-10.30 Theta burst stimulation effects on spatial neglect and functional outcome after stroke | Dr. S. Nyffeler

10.30-10.45 Fast but enduring improvement in the covert shift of attention task in visuospatial neglect | Prof. dr. H. Hildebrandt

10.45-11.00 Adaptive cueing treatment of neglect in stroke patients leads to improvements in activities of daily living: a randomized controlled, crossover trial | N. Turgut

11.00-11.15 Neuronavigated Theta Burst Stimulation (TBS) in Chronic post-Stroke Aphasia | Dr. A. Georgiou

11.15-11.30 Transcranial direct current stimulation (tdcs) for improving aphasia after stroke: a network meta-analysis of randomised controlled trials | Prof. dr. B. Elsner

11.30-12.30 | ExpoFoyer

Lunch & Exhibition

11.30-12.30 | **Lunch symposium Hokoma - MotekForce | Room 0.9**

Speakers T.B.C.

12.30-13.00 | ExpoFoyer

Poster Visit

13.00-14.30 | **Focused Symposium | Auditorium 2**

Motor and Non-motor symptoms of Parkinson's Disease: avenues for rehabilitation | Chair: Prof. Dr. A. Nieuwboer

Speakers: Dr. J. Nonnekes, Prof. Dr. E. Kalbe, Dr. T. Ellis

13.00-14.30 | **Focused Symposium | Room 0.2/0.3**

Managing daily life: evidence and implications for practice in neurorehabilitation | Chair: Dr. D. Kos

Speakers: Dr. D. Kos, Dr. T. Satink, Dr. A. Van Gils

13.00-14.30 | **Focused Symposium | Room 0.4**

Brain computer interface (BCI) in Neurorehabilitation | Chair: Dr. J. Groothuis

Speakers: Dr. Farquhar, Dr. J. Raaphorst, Dr. N. Keijsers

13.00-14.30 | **Focused Symposium | Room 0.5**

Motor learning in people after stroke: different perspectives on research and clinical practice | Chairs: Dr. S. Braun

Speakers: Dr. M. Kleynen, Dr. L. Johnson, Dr. E. Kal, Drs. J.A. Franck

13.00-14.30 | **Invited Lecture and oral abstract presentations | Room 0.8**

Chair: T.B.C.

13.00-13.30 **rTMS as a therapeutic tool in stroke- what is the evidence? | Prof. Dr. J. Liepert**

13.30-13.45 **Classification of cortical theta activity elicited by balance perturbations provides preliminary evidence of distinct cortical representation of mediolateral balance capacity in hemiparetic chronic stroke | T. Solis-Escalante**

13.45-14.00 **Motor impairment in post-stroke individuals may be related to a reduced ability of the corticospinal system to shift stretch-reflex thresholds | Dr. D. Piscitelli**

14.00-14.15 **Does Transcranial Magnetic Stimulation have an added value to clinical assessment in predicting upper limb function very early after severe stroke? | M. Hoonhorst**

13.00-14.30 | **Invited Lecture and oral abstract presentations | Room 0.9**

Chair: T.B.C.

13.00-13.30 **Physical activity after stroke: evidence and implications | Prof. Dr. F. van Wijck**

13.30-13.45 **Determinants of activity participation and life satisfaction one year after ischemic stroke: contributions of early executive function and psychosocial characteristics | D. Edwards**

13.45-14.00 **The mini-besteest as clinical test for balance problems after minor stroke; an item-wise comparison | Msc. A. Huisinga**

14.00-14.15 **Effectiveness of an innovative upper limb programme for stroke survivors: a mixed-methods investigation of quality-of-life outcomes | Msc. A. Strawson**

14.15-14.30 **Shaping therapy: what influences the content and time for therapy of the upper limb after stroke? a survey of uk therapists | Dr. R. Stockley**

Third congress on
**NeuroRehabilitation
and Neural Repair** 
From Science to Evidence-based Practice
22-23-24 May 2019 | The Netherlands

14.30-15.00 | **ExpoFoyer**

Coffee break & Exhibition

15.00-16.00 | **Auditorium 2**

Chair: Prof. Dr. G. Verheyden

Treatment of post-stroke fatigue-new horizons | *Prof. Dr. G. Mead*

16.00-17.00 | **Awards & Closing ceremony** | **Auditorium 2**

Luc van Calster award

Young scientist and best poster awards

Winner Young Scientist competition

Winner best poster competition

Closing ceremony