

# ABSTRACTS

Fagkongres 2018





# ABSTRACTS

**Fagkongres 2018**



# INDHOLD

## Særlige sessioner

100 år i bevægelse – fysioterapi, fag og profession	13
Er fremtidens fysioterapeut en gadget, en YouTube video eller stadig et menneske?	14
Motivation – hvordan kan fysioterapeuter holde mennesker i bevægelse de næste 100 år?	15

## Keynotes og Specialist talks

Meaningfulness of mean group results for determining the optimal motor rehabilitation program for an individual child with cerebral palsy	17
Leading change: The power of collaboration and thinking BIG	18
Cancer and exercise: Using the evidence to optimize functioning for our patients	19
ACT, psychological flexibility and treatment for chronic pain: Is there a role of physiotherapy?	20
Efficient rehabilitation interventions in MS and novel directions	21
Determinants of physical fitness pre and post rehabilitation in patients with routine cardiovascular, pulmonary and metabolic comorbidities	22
Clinical reasoning to inform the choice of exercises for patients with shoulder dysfunction – evidence and application	23
Osteoporosis – an update	24
Sarcopenia and frailty – preventable and treatable geriatric syndromes	25
Enhancing motor learning using virtual rehabilitation – new ways to deliver old tricks	26
Spinal pain – when is it less about the spine and more about the person?	27

## Symposier

Motivation and intensity of training – the neurological patient	29
Blood flow restricted exercise after surgery or disease: Adaptions, clinical efficacy and safety	29
Evidence-based clinical reasoning for exercises in rotator cuff related disorders	30
Assessment of physical performance in cardiac and pulmonary rehabilitation?	30
Cancer rehabilitering	31
Osteoporosis – the overlooked people's disease	31
Fysioterapi og seksuel sundhed	32
When work hurts	33
Optimeret belastning og forebyggelse af idrætsskader	34
Spinal pain: Myths, facts and treatment strategies	34

---

Early out of bed mobility	35
Ultrasound imaging: Evidence and clinical practice	35
The use of intervention studies in planning evidence-based interventions for the individual child – from research to clinical practice	36
Patienters, pårørendes og personalets opfattelser af fysisk aktivitet og mobilisering under indlæggelse	37
Multipel Sclerose: Rehabilitering i Danmark, træningsanbefalinger og anbefalede måleredskaber	37
Aktiv behandling af muskuloskeletale smerter med fokus på behandlingsprogression og træningsdosering	38
What is sarcopenia and how can we handle it?	39
Fysioterapi til patienter med PTSD – psykiatri eller somatik?	39
Rehabilitation for patients with pulmonary embolism	40

## Workshops

Aktiv og gravid – hvor meget og hvor lidt?	43
Klinisk bevægelsesanalyse – subjektive og objektive analysemetoder i relation til muskuloskeletale problematikker	43
Dynamometri – en nem og brugbar metode til en objektiv måling af muskelstyrke	44
Bliv endnu bedre til at anvende Gross Motor Function Measure til børn med cerebral parese	44
Ledelse som karrierevej	45
Molliidragten – et hjælpemiddel der udfordrer tonus	45
Studerende på kandidatuddannelser – projekter, ideer, spørgsmål og sparring	46
How to use blood flow restricted exercise in clinical practice?	46
CPAP-behandling på hospital – praktisk anvendelse	47
Kunsten at sætte ægte mål i hverdagsrehabilitering	47
Fysioterapeutisk samtale om seksuel sundhed	48
Digitalt understøttet genoptræning (DUG) – hvor er vi og hvor skal vi hen?	48
Rehabilitering gennem leg, robotter, sensorer og apps	49
How to address Achilles tendinopathy when the usual first line treatment fails?	50
Tips and pitfalls in diagnostic ultrasound imaging of the rotator cuff tendons – when is it pathological?	50
Fra idé til handling – fra fysioterapeut til iværksætter	51
Patienten med erhvervet hjerneskade – undersøgelse og behandling af tonusproblemer	51

## Debatter

Arbejde til 70 – hvordan kan vi holde til det?	53
Børnefysioterapi: Hvordan øger vi anvendelsen af standardiserede målemetoder?	53
Dansk Selskab for Fysioterapi – specialisering, standardisering eller individualisering?	54
Fysioterapeuter i akutfunktioner – hvordan ser en national kompetenceprofil ud?	54
Motivationsarbejdet – hvor meget må fysioterapeuten bestemme?	55

## Korte foredrag

Patterns of multi-morbidity in older medical patients and how they relate to mobility the first year after an acute admission	57
Interrater reliability of Volume-Viscosity Swallowing Test; screening for dysphagia among hospitalized elderly medical patients	57
The Cumulated Ambulation Score is superior to the NMS and the DEMMI in predicting discharge destination of geriatric patients	58
DEMMI og RSS test til stratificering af ældre borgere i almen genoptræning i Hvidovre Kommune	58
Is hip muscle strength normalized in patients with femoroacetabular impingement syndrome one year after hip arthroscopic surgery?	59
Tendon-related abnormalities identified with ultrasound are common in symptomatic hip dysplasia	60
Progressive resistance training in patients with hip dysplasia scheduled for periacetabular osteotomy	60
Effects of supervised exercise compared to home-based exercise after total hip replacement – a meta-analysis of randomised controlled trials	61
Development and evaluation of a new screening algorithm to improve the referral pattern of outpatient orthopedic knee patients	62
Cut-points for maximal knee-extension strength indicating sarcopenia is associated with functional performance four months after hip fracture	62
Reliability of Barfods ultrasound measurement on patients with an Achilles tendon rupture	63
Comparable effect of partly supervised and self-administered exercise programme in early rheumatoid arthritis – a randomised, controlled trial	64
Objective assessment of postural control after lower limb amputation: a pilot study	64
Translation and cross-cultural adaptation of the Watson 10-meter Walking Test into Danish; performance stability and interrater-reliability in patients following neurological disorders	65
An exercise programme for people with severe polyneuropathy and diabetic foot ulcers – 5 case reports on feasibility and safety	65
The effect of early municipality based rehabilitation for dysvascular lower-limb amputee patients	66
Store forskelle kommunerne imellem, når det gælder genoptræningsindsats efter indlæggelse	67

---

---

Usefulness of web-based information on COPD rehabilitation	67
Overcoming challenges of early rehabilitation of discharged patients with chronic obstructive pulmonary disease (COPD) in a Danish region	68
Respiratory physiotherapy - a clinical guideline	69
Systematic approach to competence development in written communication	69
Translation and cross-cultural adaptation of the Chelsea Critical Care Physical Assessment Tool into Danish	70
Inter-tester reliability and responsiveness of the Danish version of The Chelsea Critical Care Physical Assessment Tool	71
EMG evaluering af tre elastikøvelser til sengeliggende patienter	71
How do physical therapists manage headache in primary care?	72
Test-retest reliability of exercise-induced hypoalgesia after aerobic and isometric exercises in humans	72
The smallest worthwhile effects of physiotherapy for neck, shoulder and low back pain: how low can we go?	73
Clinical course and prognosis of musculoskeletal pain in patients referred for physiotherapy: does pain site matter?	74
Reliability of clinical assessment methods for assessing scapular position and function. An inter-rater reliability study	75
Conservative treatment for patients with subacromial impingement: Changes in clinical core outcomes and their relation to specific rehabilitation parameters	75
Surface electromyography of forearm and shoulder muscles during violin playing	76
Maximal hip and knee muscle strength are not related to neuromuscular pre-activity during sidecutting manoeuvre: a cross-sectional study	77
Quadriceps muscle activity during commonly used strength training exercises shortly after total knee arthroplasty: implications for home-based exercise-selection	78
Low physical performance is associated with developing pulmonary complications following acute high-risk abdominal surgery	78
Detaljeret beskrivelse af en kompleks rehabiliteringsintervention til patienter med lænderygsmerter	79
Kan fysioterapijournaler fra kroniske lænderyg patienter anvendes til at vurdere klinisk relevant effekt?	80
“Keep it simple”: patient involvement in developing a patient reported outcome instrument for patient with lumbar radiculopathy	80
Development of a patient-reported outcome instrument for patients with lumbar radiculopathy	81
Motorisk påvirkning før og efter operation hos patienter med lumbal diskusprolaps	82
Supervised pelvic floor muscle training versus attention-control massage treatment in patients with faecal incontinence: a randomised controlled trial	82
Health care students' attitudes towards addressing sexual health – psychometric results of the Danish version	83

---

Impaired cerebral autoregulation during head up tilt in patients with severe brain injury	84
Modificeret "Functional Reach" test er reliabel til hospitalsindlagte patienter med apopleksi	84
Succesfuld implementering af klinisk retningslinje for fysioterapi til patienter med amyotrofisk lateral sklerose på danske hospitaler	85
Reliability of the Six Spot Step Test in persons with multiple sclerosis	86
Comparison of 4 outcome measures used for assessment of functional outcome in patients with a hip fracture during acute hospitalization	86
Effectiveness of 6 versus 12 weeks outpatient physiotherapy including progressive strength training commenced shortly after hip fracture: a multicenter RCT	87
Performance stability and interrater reliability of the 10-metre Walking Test in older community-dwelling patients with hip fracture	88
DEMMI as an indicator for rehospitalisation in acute geriatric patients	88
Effect of extended scope physiotherapists assessments in orthopaedic diagnostic setting: a systematic review	89
Self-efficacy har en væsentlig betydning for fysisk funktion ved hofteartrose	89
Poor replicability of recommended exercise interventions for knee osteoarthritis: a descriptive systematic review of current clinical guidelines and recommendations	90
Tidligere knæskade har betydning for symptombilledet hos patienter med knæartrose	91
Exercise-induced pain changes associated with changes in muscle perfusion in knee osteoarthritis: exploratory outcome analyses of a randomized controlled trial	91
No exacerbation of knee joint pain and effusion following preoperative progressive resistance training in patients scheduled for total knee arthroplasty	92
Nedsat postoperativ bevægelig efter total knæalloplastik øger risikoen for brisement	93
Challenges to establish and support an education in physiotherapy at Zanzibar, Tanzania	93
Innovation in habilitation for children with cerebral palsy – a cross sectorial and interdisciplinary model	94
Threshold values of ankle dorsiflexion and gross motor function in children with cerebral palsy – a cross-sectional study	94
Use of instrumented gait analysis for individually tailored interdisciplinary interventions in children with cerebral palsy – a randomized controlled trial	95
Inter-rater reliabilitet af dansk Challenge-test af avancerede motoriske funktioner til børn og unge med cerebral parese	95
Inklusions- og eksklusionsparadokset – når elever med autisme og ADHD skal inkluderes i skoleidrætten	96
Reliabilitet af Graded Cycling Test med Talk Test og 30 sekunders rejse-sætte-sig test til patienter i testostéronsænkende behandling for prostatacancer	96
Perceived motivation and barriers for attending supervised training during admission for patients with hemamatological malignancies	97
Improvement of supervised training among inpatients with hematological cancer	98

---



The effectiveness of exercise-based rehabilitation in patients with myeloproliferative neoplasms – an explorative study	98
Depression, socioeconomic factors and ethnicity as predictors of cardiorespiratory fitness before and after cardiac rehabilitation	99
Mechanisms influencing the implementation of a programme for people with low back pain – GLA:D®Back	100
Neurophysiologic pain-education for patients with chronic low back pain – a systematic review and meta-analysis	100
The efficacy of cognitive functional therapy compared to usual care for people with non-specific persistent low back pain in a secondary care setting – a feasibility cohort study	101

## Posters

Ny potentiel konditest til personer med apopleksi. Åstrands et-punkts cykelergometer test udført unilateralt med mindst afficerede ben efter apopleksi	103
Intravenous saline administration in patients with severe acquired brain injury and orthostatic intolerance for tilt-table mobilization	103
A novel health professional-led stroke self-management intervention – an evaluation study	104
Udviklingsprojekt: Balancehold til patienter med erhvervet hjerneskade	104
Fysisk træning af unge med træthed efter erhvervet hjerneskade: Et eksperimentelt, ikke-randomiseret pilotstudie	105
Hvilken læringsmæssig betydning har det for fysioterapeutstuderende, at der etableres autentiske settings med patienter/borgere i teoriundervisningen?	106
Tabletteknologi fysioterapi – et pædagogisk redskab i klinisk undervisning	106
Innovation-camp as method in health education – a study on inter-discipline, learning and participation	107
Faglig udvikling, forskning og frække fredage – udviklingsprojektet KUUFert i Fysio-Ergoterapien, Hvidovre Hospital	107
Predictors of basic mobility skills at discharge in 235 patients with hip fracture	108
The Cumulated Ambulation Score as a predictor of mortality and readmission in 220 patients with hip fracture	109
Prevalence of Sarcopenia in a Danish geriatric out-patient population	109
Exercise interventions for treating sarcopenia – a systematic review and meta-analysis of controlled trials	110
Is a biopsychosocial guideline useful as a decision tool selecting neck patients for group-based intervention? A case-control study	110
Cognitive functional therapy for the management of a 36 y/o female with persistent back pain and Modic change type 1	111
Running biomechanics changed after 4 weeks running with increased running step rate	112

Experimental study: the impact of a novel wheelchair driving device on shoulder muscle activity during forward and reverse wheelchair propulsion	112
Acute experimental back pain does not affect lumbar movement variability in healthy or currently asymptomatic recurrent low back pain patients	113
7 versus 12 weeks of exercise in hospital based COPD rehabilitation. Does it make a difference?	114
Barriers and motivational factors towards physical activity in COPD – an interview based pilot-study	114
Maximal inspiratory pressure in patients with COPD	115
Dysfunctional breathing – extent of screening and treatment in Denmark 2016; an exploratory survey	115
Evaluering af opgaven at etablere og gennemføre et interventionsstudie som tværregionalt multicenter-RCT	116
L.A.K.S Lige Adgang i Kommunale Sundhedsydelser	117
Patientinddragelse i udarbejdelsen af genoptræningsplaner. Forventninger hos patienter og refleksioner blandt terapeuter	117
Evaluering af LIVA – en digital platform til borgere med livsstilssygdomme – en Model for Assessment of Telemedicine (MAST) evaluering	118
Kvalitetsudvikling i kommunal rehabilitering til borgere med lænderygsmerter – et tværsektorielt evalueringsprojekt	119
Udviklingsprojekt om fysioterapi som en del af en kommunal beskæftigelsesrettet indsats	119
How to move? Quadriceps muscle activity, weight-loading and patient experiences during two different pivot transfers in subacute stroke patients	120
Implementering af Graded Repetitive Arm Supplementary Program (GRASP) på Center for Hjerneskade – et case-studie	121
Move it to improve it (Mitii) – betydning af virtual reality træning for patienter med apopleksi. En eksplorativ interviewundersøgelse	121
Prædiktionsevne af Motor Assessment Scale (MAS) på udskrivelsesdestination efter indlæggelse med apopleksi	122
Neuromuskulær Elektrisk Stimulation af underekstremitet i den Akutte fase efter blodprop i hjernen (NESA) – et kvalitativt og kvantitativt pilotprojekt	123
Udvikling og evaluering af et rehabiliteringsprogram til kvinder med oplevede symptomer efter HPV-vaccination	123
Bækkenbundstræning gavner mand, som har udviklet afføringsinkontinens efter operation for endetarmskræft – et case-studie	124
Life with and after cancer – an interprofessional development project	125
Oplevelser med anvendelse af kompressionsarmstrømpe – interviews med kvinder med brystkræft-relateret lymfødem af arm	125
Det er sgu mit liv! En kritisk psykologisk analyse af hjerterehabilitering og betydningen hjerterehabiliteringens betingelser har for deltagernes daglige livsførelse	126

---

Akupunktur som smertebehandling til patienter med postoperative smerter efter sternotomi – et prospektivt pilotprojekt	126
Ændringer i lungevolumina og -funktion fra liggende til siddende stilling to til tre dage efter hjerteoperation	127
Learning and coping strategies in cardiac rehabilitation – one-year effect on return to work: a randomised controlled trial	128
Fysisk bevægelse for alle børn i folkeskolen	128
Kvalitetsudvikling af medlemsbladet "Børn i fysioterapi"	129
Fysioterapeuters erfaringer med standardiserede målemetoder i pædiatrien	130
Reliability of the Danish translation of the Trunk Control Measurement Scale (TCMS-DK)	130
Are obese children able to exercise with high training intensity?	131
Kropsbevidsthed – ensidig sensorisk stimulation påvirker midtlinjefornemmelsen	131
The Six Spot Step Test is a reliable measure of balance during walking in persons with Parkinsons disease	132
The effects of aerobic exercise for migraine and co-existing tension-type headache and neck pain. A randomized, controlled, clinical trial	133
Kognitiv adfærdsterapi kombineret med fysisk træningsterapi til borgere med længerevarende generaliserede smerter: En systematisk litteraturgennemgang og metaanalyse	133
The influence of Virtual Reality Optic Flow Stimulation on postural control in children	134
Modificeret Shoulder Pain and Disability Index (mSPADI) i kommunal genoptræning af borgere med artroskopisk subakromiel dekompression (ASD) og humerusfraktur (HR)	134
Association mellem erfaringsgrundlag og patientrapporteret effekt med udgangspunkt i praksis, baseret på retningslinjerne for "Godt Liv med Artrose i Danmark"	135
Efficacy of pre-operative progressive resistance training in patients undergoing total knee arthroplasty – 12 month follow-up	136
Knowledge, use, and implementation of National Clinical Guidelines in community-based rehabilitation. A cross-sectional survey	136
Modifiable predictors for impression of change and acceptable symptom state among musculoskeletal disorders in physical therapy – a prospective cohort study	137
<b>Forfatterindeks</b>	138
<b>Grundfortælling</b>	146



# SÆRLIGE SESSIONER

—



FOTO: JOACHIM RODE

**Danske Fysioterapeuter fylder 100 år**, men fysioterapiens rødder går langt længere tilbage i historien. Det afdækker historieprofessor Kurt Jacobsen i en ny bog, 100 år i bevægelse, der bygger på to års studier i et omfattende arkivmateriale fra Danske Fysioterapeuter, Fysioterapeutskolen i København, Sundhedsstyrelsen, Indenrigsministeriet og Lægeforeningen m.m.

I sit foredrag vil Kurt Jacobsen trække hovedlinjerne i fagets og professionens udvikling fra slutningen af 1800-tallet til i dag. Han gør op med myten om, at Danske Fysioterapeuter er en stand skabt af de danske læger. I stedet fortæller han, hvordan det gennem hele historien har været fysioterapeuterne selv, der har drevet udviklingen og ofte i konflikt med læger, sundhedsmyndigheder og politikere.

I foredraget vil Kurt Jacobsen fokusere på en række temaer og dilemmaer, som har været centrale i fysioterapeuternes kamp, der har ført faget og professionen frem til sin nuværende position, og som også vil stå centralt i fremtiden: Forholdet til lægerne og henvisningspligten, uddannelsens indhold og varighed, forskning, evidens og alternative behandlinger samt forskellene på offentlig og privat.

**Kurt Jacobsen, torsdag kl. 10.30-11.10, Plenum**

## 100 år i bevægelse – fysioterapi, fag og profession



## Er fremtidens fysioterapeut en gadget, en YouTube video eller stadig et menneske?

**Kom og hør** om hvilken fremtid fysioterapien og fysioterapeuterne går i møde. Med afsæt i tre tendenser sætter vi fremtidens fysioterapi til debat. For hvad betyder det for fysioterapeuter, når træningsinstruktionen kan findes på YouTube, og man kan købe diverse gadgets til at monitorere ens egen sundhed? Bliver fysioterapeuten så overflødig? Og skal fysioterapeuter frygte politianmeldelser, patientklager og flere tilsynssager i takt med ny skrap lovgivning om tilsyn? Endelig stiller vi skarpt på, hvad der sker med empatien og patienten i centrum i takt med flere standardiserede, evidensbaserede behandlinger?

Blandt de medvirkende er Tanja Danner Nielsen, som er Public & Healthcare Advisory, fra IT-virksomheden NNIT, vicedirektør på Sjællands Universitetshospital Beth Lilja og professor i europæisk litteratur Peter Simonsen.

Paneldebatten ledes af læge og tv-journalist Peter Qvortrup Geisling.

**Moderator Peter Qvortrup Geisling, fredag kl. 12.10-13.10, Plenum**



FOTO: JUST HUMAN

## Motivation – hvordan kan fysioterapeuter holde mennesker i bevægelse de næste 100 år?

**Chris MacDonald** er født og opvokset i USA, men har boet i Danmark siden 1999. Han er uddannet cand.scient. i human fysiologi ved Københavns Universitet og har en baggrund som eliteatlet. Han har bl.a. deltaget i Race Across America, der er et 5000 km langt cykelløb tværs over USA.

Chris MacDonald er kendt i hele Norden for sine foredrag om motivation, livsstilsændringer og mental velvære, og ikke mindst for sin optimistiske tilgang til sine tilhørere. Han kommer med sit bud på, hvordan fysioterapeuter fortsat kan holde deres egen og deres patienters motivation høj.

**Chris MacDonald, lørdag kl. 12.30-13.15, Plenum**



KEYNOTES &  
SPECIALIST TALKS

—



---

## TORS DAG 12. APRIL



### Meaningfulness of mean group results for determining the optimal motor rehabilitation program for an individual child with cerebral palsy

*Diane L. Damiano, PT, PhD, Senior Investigator and Chief of Functional & Applied Biomechanics Section*

---

*Dr. Diane Damiano is the Clinical Center's Chief of the Functional and Applied Biomechanics Section within the Rehabilitation Medicine Department. A physical therapist by training, Dr. Damiano holds a PhD in research methods and biomechanics. Dr. Damiano's area of expertise is in the investigation of both existing and novel rehabilitation approaches in children with cerebral palsy.*

*Several years ago, she was one of the first researchers to recognize that spastic muscles were, in fact, weak and needed strengthening. Her work in this area has helped to revolutionize the treatment of these patients.*

---

**A foundation for** evidence-based physiotherapy practice in cerebral palsy (CP) has been provided by accumulating data from clinical studies investigating the efficacy or effectiveness of interventions to improve motor functioning in CP. Randomized clinical trials reporting mean group differences between novel and no or standard therapies are the gold standard.

However, even if a statistically significant positive mean group effect is found, this does not signify, that this intervention was effective for each study participant or ensure positive outcomes for all with CP.

A personalized approach to medical care is currently being advocated based primarily on increasingly recognized genetic variations in individual responses to medications and other therapies. A similar approach is also warranted, and perhaps more justifiable, in CP which includes a heterogeneous group of disorders. Even interventions deemed highly effective in CP demonstrate a range of individual responses along a continuum from a negative or negligible response to a strong positive effect, the bases for which remain incompletely understood.

This talk recommends, that the next critical step in advancing evidence-based practice is to implement novel research strategies, being utilized successfully in other medical disorders, to identify patient factors, that best predict treatment responses in CP, so we can not only answer the question "what works", but also "what works best for whom".

**Specialist talk, torsdag 11.45-12.30, Sjælland**



## Leading change: The power of collaboration and thinking BIG

*Julie Bernhardt, PT, professor, Centre of Research Excellence in Stroke Rehabilitation and Brain Recovery*

---

*Julie has worked for over 30 years in the field of stroke, first as a physiotherapist, to now, an internationally renowned clinician researcher. Labelled an “enthusiologist” by her peers, Julie leads a team focused on development and testing of new interventions, that aim to improve outcomes for people with stroke.*

*She directs Australia’s National Health and Medical Research Council funded Centre of Research Excellence in Stroke Rehabilitation and Brain Recovery. This large collaborative centre includes researchers from across Australia, whose work spans basic science (biology of recovery) to implementation science.*

*In 2016 she convened the first international Stroke Recovery and Rehabilitation Roundtable (SRRR) to establish research standards for stroke recovery research in 4 key areas: Discovery and translation, biomarkers, clinical trial outcomes and intervention development and reporting. She established the Women in Science Parkville Precinct (WISPP) collective action program between 5 leading research institutes, which supports equity in science careers. Invitations to the World Economic Forum in China and World Health Organisation are testament to the global influence of Julie’s work and its potential to improve the lives of millions of people.*

---

**Think BIG, collaborate,** take risks, and get a mentor ... or two.

Julie will inspire her audience to get comfortable with leading change by describing her experiences in building an international collective action focused on brain repair.

Throughout her presentation, Julie will provide insights into what is needed for successful leadership and influencing change.

It takes a long time, requires big thinking, a great team of collaborators and some difficult conversations at times.

**Keynote, torsdag 14.20-15.05, Plenum**

---



ANNA CAMPBELL



NICOLE L. STOUT

## Cancer and exercise: Using the evidence to optimize functioning for our patients

*Anna Campbell, associate professor, Edinburgh Napier University and Nicole Stout DPT, CLT-LANA, Cancer Rehabilitation Project Coordinator, National Institutes of Health*

### Anna Campbell

*Dr. Anna Campbell is Associate Professor at Edinburgh Napier University. For over seventeen years, Anna Campbell has researched the physical and psychological benefits of staying active after a cancer diagnosis; publishing over 45 research papers and three book chapters in the field of exercise and cancer survivorship.*

*Anna was instrumental in putting research into practice in the UK: producing two exercise DVDs for cancer survivors; setting up the first free community based exercise programme; and she is Director of CanRehab ([www.canrehab.co.uk](http://www.canrehab.co.uk)), which provides training and education for fitness and health professionals working with cancer survivors in the community.*

*Anna is also a consultant for the UK charity Macmillan Cancer Care, assisting in the establishment and evaluation of UK wide community based exercise programmes for cancer patients and survivors.*

### Nicole L. Stout

*Dr. Nicole L. Stout is a renowned health care researcher, consultant, educator, and advocate. She is the chief executive officer of 3e Services, an information technology consulting firm, where she serves as a medical affairs consultant for biotech and health care wearable firms. Additionally, she supports the Office of Strategic Research at the National Institutes of Health, Rehabilitation Medicine Department leading the Cancer Rehabilitation Initiative.*

*Dr. Stout is an internationally recognized expert and leader in cancer rehabilitation and lymphedema. She has given over 200 lectures nationally and internationally, authored and co-authored over 50 peer-review and invited publications, several book chapters, and is the co-author of the book *100 Questions and Answers about Lymphedema*. Her research publications have been foundational in developing the Prospective Surveillance Model for breast cancer rehabilitation and supporting national initiatives in cancer rehabilitation.*

*Dr. Stout is the recipient of numerous research and publication awards. She has received service awards from the National Institutes of Health Clinical Center, the Navy Surgeon General, and the Oncology Section of the American Physical Therapy Association and was recently selected as a Fellow of the American Physical Therapy Association.*

**The benefits of** exercise are well established as safe and effective for individuals going through cancer treatment. Exercise interventions are effective during and after cancer treatment to enhance physical function, improve psychological status, and mitigate many of the common side effects associated with medical treatment of cancer.

However, exercise prescription and rehabilitation services are not routinely integrated into oncology care and many health care providers fail to proactively include exercise as a part of standard oncology care.

This lecture will review the emergence of evidence that supports exercise for the oncology population, identify where the field is today with regard to the evidence base and will suggest ways, that physiotherapists can improve their knowledge and skills in an effort to better integrate exercise into cancer care plans.

The overall benefits of exercise will be discussed as well as therapeutic interventions that use exercise to discretely target specific impairments such as fatigue, lymphedema, cardiorespiratory deconditioning, muscle wasting and others.

Exercise will be reviewed across all cancer types and will explore the effectiveness of exercise intervention throughout the continuum of cancer care, from prehabilitation to end of life.

**Keynote, torsdag 17.40-18.25, Plenum**

---

## FREDAG 13. APRIL



### ACT, psychological flexibility and treatment for chronic pain: Is there a role of physiotherapy?

*Lance M. McCracken, professor, Institute of Psychiatry, Psychology and Neuroscience, King's College*

---

*Lance McCracken is Professor of Behavioural Medicine at King's College London. He has held his post in the Health Psychology Section of the Psychology Department in the Institute of Psychiatry, Psychology, and Neuroscience (IoPPN) since 2011. He is also a Consultant Clinical Psychologist and the Psychology Lead at the INPUT pain management centre at St Thomas' Hospital in London.*

*He is on the editorial boards for numerous journals in the fields of pain and clinical health psychology, including The Journal of Pain, Health Psychology, Annals of Behavioral Medicine, Journal of Behavioral Medicine, and European Journal of Pain, where he is also Psychology Section Editor. He is a clinical researcher and has published over 220 scientific articles and chapters, and two books, most of these on treatment development for chronic pain, dating back more than 25 years.*

---

**Dealing effectively with** patient behavior could be the most important challenge of physiotherapy for chronic pain. In fact, there is no good outcome in physiotherapy for chronic pain without it being reflected positively in patient behavior. Lance McCracken will present principles and evidence to show whether a model called the Psychological Flexibility model might apply usefully to physiotherapy approaches to chronic pain.

Every interaction between conscious people is psychological in nature, at least in part. This most particularly includes interactions between people with chronic pain and those who assess them and provide them with health care.

Whenever a physiotherapist deems to interact with joints, muscles, or parts of the nervous system of a person with chronic pain, they also interact with the person in charge of those tissues. Further, no matter the presumed mechanism of therapeutic effect, good outcomes from treatment can be conceived as predominantly behavioral. These include the treatment recipient saying they benefitted, participating in the daily activities as they want to do, and refraining from returning to your care (or anyone else's) if there is no benefit to gain from doing so.

These points call for physiotherapists to equip themselves with models of human behavior, and skills for assessing and changing human behavior, that are fit to the frequent and challenging problems presented by chronic pain.

Lance McCracken will present the theory and evidence around the Psychological Flexibility (PF) model and chronic pain, and the primary treatment approach focused on improving PF, a form of cognitive behavior therapy called Acceptance and Commitment Therapy (ACT). Evidence reviewed will include recent meta-analyses, studies of treatment process, and studies of PF in health care providers.

A recent trial of a brief physiotherapist delivered treatment influenced by ACT, and tested in people with chronic low back pain, will also be described.

**Keynote, fredag 9.00-9.45, Plenum**

---



## Efficient rehabilitation interventions in MS and novel directions

*Peter Feys, PT, professor, University of Hasselt, Belgium*

*Peter Feys is professor in rehabilitation sciences and physiotherapy at Hasselt University, and head of the Rehabilitation Department within the Faculty of Medicine and Life Sciences. He is responsible for education in neurological rehabilitation in both a 3 years Bachelor and 2 years Masters educational program.*

*His inter-disciplinary research is focused on the assessment and rehabilitation for gait and upper limb function in persons with neurological conditions. It comprises investigations of motor fatigability, music-based entrainment and sonification, upper limb training, cognitive-motor interference, technology-supported training, and community self-directed training. Neuro-imaging is performed to understand the impact of interventions on neural function and structure. The research is performed in persons with Multiple Sclerosis and secondary stroke.*

*Peter Feys has published over 100 peer-reviewed articles in international clinical neurological, imaging, and rehabilitation journals. He has been president of RIMS (Rehabilitation in MS), a European network of best practice and research from 2011-17 and he is an editorial board member of 'Multiple Sclerosis Journal' and 'Neurorehabilitation and Neural Repair'.*

*In addition, Peter Feys contributes actively to WHO Rehabilitation Action Plan 2030 as a voluntary consultant.*

**Persons with Multiple Sclerosis** (pwMS) suffer from a chronic condition affecting the central nervous system. PwMS may manifest many different functioning problems, that should be addressed from a multi-disciplinary perspective. For a long time, many clinicians were not regarding rehabilitation as an effective treatment strategy. Accumulating evidence is however now available on the effects of physical exercise (resistance and endurance training) and physical rehabilitation (balance, gait training).

It was shown that pwMS can benefit at the body function (muscle strength and physical fitness) and activity (walking) levels of the ICF, in the domain of health related quality of life while also personal factors as depression and fatigue can be reduced. Interestingly, recent studies do also propose practical applicable training programs that are considered to some extent as neuro-protective, and may also impact on cognitive function. It seems to be possible to reach also benefits in more disabled patients.

There are also novel directions in MS rehabilitation research. The concept of exercise therapy has also been incorporated in technology-supported rehabilitation for gait and upper limb training. Task-oriented rehabilitation for the upper limb seems also effective. Besides, there is increasing attention to phenomena of cognitive-motor interference and motor fatigability. It is thought that disabled persons with MS show a higher cognitive-motor dual task cost than healthy controls, that is impacting on daily life and may be related to falls.

Motor fatigability refers to the difficulty, that pwMS may experience to sustain muscular activity during a prolonged task. At body function level, reductions in maximal muscle strength have been found during 30" isometric contractions or repeated dynamic contractions. At activity level, half of disabled pwMS are likely slowing down by more than 15% during the six-minutes walking tests. There is emerging research in these domains, that likely will lead to novel rehabilitation approaches in the near future.

**Specialist talk, fredag 9.55-10.35, Odense**



## Determinants of physical fitness pre and post rehabilitation in patients with routine cardiovascular, pulmonary and metabolic comorbidities

*Patrick Doherty, PT, PhD, Deputy Head of Department of Health Sciences, University of York, United Kingdom*

---

*Professor Patrick Doherty is Chair of Cardiovascular Health leading the BHF Cardiovascular Health Research Group carrying out multidisciplinary research across a range of CVD related interventions with an aim to optimise service delivery and improve outcomes for patients.*

*Patrick was a former president of the British Association for Cardiovascular Prevention and Rehabilitation (BACPR) and the Chair of the Cardiac Rehabilitation Section of the European Association for Preventive Cardiology (EAPC).*

---

**Patrick Doherty will highlight** data from the UK, which intends to improve the quality of services and outcomes for patients attending multi-morbid rehabilitation interventions. The analyses will investigate three common comorbidities (COPD, Heart failure and Diabetes) seen in cardiovascular and pulmonary rehabilitation.

The age of patients attending ranged from 18 to 108 years, with a mean age of 70 years for females and 66 years for males with over 60% of patients presenting with one or more comorbidities. Based on a study population in excess of 100,000 patients the likelihood of attending rehabilitation and undertaking a fitness assessment varied by gender across different comorbidities.

The level of fitness and physical activity status prior to starting rehabilitation was lowest in those with three or more comorbidities. The extent of change following an average intervention period of 9-weeks was equivalent across all comorbidity categories. The extent of post intervention outcomes, in terms of fitness gain and physical activity status, was determined by both programme level and patient level factors. There continues to be large variation in the quality of services offered with around 25% of programmes not meeting published clinical minimum standards.

In summary, most patients benefit from rehabilitation in terms of fitness gains but there remains an urgent need for programmes to improve by offering a more tailored intervention aligned with patient baseline characteristics prior to starting rehabilitation. Improvement in physical fitness is a core component underpinning the effectiveness of rehabilitation and patients tend to have only one attempt, which means we should make it count.

**Specialist talk, fredag 9.55-10.35, Fyn**

---



## Clinical reasoning to inform the choice of exercises for patients with shoulder dysfunction – evidence and application

*Karen Ginn, PT, professor, Sydney Medical School, University of Sydney*

*Professor Ginn is a musculoskeletal anatomist in the Discipline of Anatomy & Histology, Sydney Medical School, University of Sydney. She teaches functional, applied anatomy to various health professional groups and is a musculoskeletal physiotherapist in part time private practice.*

*She is involved in research related to the assessment and treatment of shoulder dysfunction including: Clinical trials investigating the efficacy of conservative and surgical treatment for shoulder dysfunction; electromyographic (EMG) studies investigating shoulder muscle activation patterns in normal subjects and patients with shoulder dysfunction; EMG studies evaluating shoulder exercises; studies evaluating the validity and reliability of components of the physical examination of the shoulder; experimental shoulder pain studies; investigations into shoulder stiffness and cortical changes associated with shoulder pain; and programs designed to prevent the development of shoulder pain in the elderly & various at risk professional groups.*

*She has approximately 50 publications in peer-reviewed journals and is currently a member of the Board of the International Congress of Shoulder and Elbow Therapists.*

**Exercise is the** mainstay of conservative treatment for shoulder dysfunction. However, evidence to support the efficacy of specific exercises for different categories of shoulder dysfunction is limited leaving clinicians with the dilemma of how to choose effective, efficient exercises for their patients with shoulder dysfunction.

Karen Ginn will explore a rationale, evidence-based approach to determining and progressing patient-specific therapeutic shoulder exercises. The validity and reliability of clinical evidence gained from the patient's diagnosis, radiographic and physical examination findings will be explored to evaluate their role in informing an evidence-based clinical reasoning process to select appropriate therapeutic exercises. Recent evidence on the function of shoulder muscles, particularly the stabiliser function of the rotator cuff and axioscapular muscles, will also be presented.

Finally a case study of a patient with shoulder pain is presented to illustrate this evidence-based clinical reasoning approach to the selection and progression of a patient-specific exercise programme.

**Specialist talk, fredag 9.55-10.35, Sjælland**



## Osteoporosis – an update

*Emma Clark, Dr, Consultant Senior Lecturer in Rheumatology, Musculoskeletal Research Unit, University of Bristol*

---

*Clinically Dr. Emma Clark specialises in general rheumatology and osteoporosis.*

*She trained in medicine at St. Georges Hospital Medical School London, epidemiology at the London School of Hygiene and Tropical Medicine, and studied for her PhD in Bristol.*

*She is a Consultant Senior Lecturer in Rheumatology at the University of Bristol, and her main research area is musculoskeletal epidemiology, with a particular interest in identification of older people with vertebral fractures.*

*Emma Clark is the Associate Editor of Therapeutic Advances in Chronic Diseases – Musculoskeletal Diseases. And she is a member of the BSR Heberden Committee and the National Osteoporosis Society Clinical & Scientific Committee.*

---

**This update will** cover the importance of osteoporosis, which of your patients may have osteoporosis, an update on physical activity for people with osteoporosis, and suggestions on how to provide simple education and advice for these patients.

Osteoporosis is one of the most common diseases of older people with one in three women and one in five men experiencing an osteoporotic fracture in their lifetime. Fracture rates vary across Europe, with older people living in Denmark having the highest fracture risk of all.

It is important to understand which of your patients may have osteoporosis and/or vertebral fractures. Risk factors for osteoporosis include advancing age, family history, low body weight, smoking, excess alcohol intake, systemic inflammatory diseases and some medications. In addition, risk factors for fracture such as falls are important contributory factors to the impact of osteoporosis.

There is often concern among patients and healthcare professionals about physical activity in the setting of osteoporosis and/or vertebral fractures. Emma Clark will focus on the potential benefits and possible adverse effects of everyday activity and/or specific movements and exercises for people with osteoporosis. The final section will cover some suggestions for providing 'best practice' recommendations on physical activity for people with this diagnosis.

**Specialist talk, fredag 10.40-11.25, Odense**

---





## Sarcopenia and frailty – preventable and treatable geriatric syndromes

*Tommy Cederholm, MD, professor, Uppsala University, Sweden*

*Tommy Cederholm is professor of clinical nutrition at Uppsala University, Sweden, with research focus on energy, fat and protein interactions with disease and ageing. He is an MD and board certified in internal medicine and geriatric medicine and part-time senior consultant in geriatrics. He has been treasurer of ESPEN and active in international initiatives to promote the concept of sarcopenia. He has co-authored about 230 peer-reviewed papers.*

**Frailty and sarcopenia** emerge as threats for independence and survival during ageing. Resistance exercise, healthy food, adequate protein intake, sometimes nutritional supplementation and perhaps anabolic drugs may increase quality of life and postpone disability and mortality.

Early identification of sarcopenia and frailty, i.e. loss of muscle mass, function, and reserve capacities is needed for initiating preventive training and nutrition measures in older people. Ageing, catabolism induced by disease, sedentarism and undernutrition are risk factors. The etiology is multifaceted, thus treatment needs to be multi-modal.

Progressive resistance training (PRT) is first-line prevention/treatment and increases muscle power by enhancing muscle protein synthesis, by reducing inflammation and increasing mitochondrial biogenesis.

Healthy food patterns high in unsaturated fats, complex carbohydrates, whole-grains and anti-oxidant rich fruits, vegetables and drinks are associated with less risk of frailty. Among nutrients proteins and essential amino acids appear to have the strongest effects on muscle maintenance. Observational studies indicate that protein intakes  $>1.2$  g/kg/body weight/day are related to preserved muscle mass, reduced risk of mobility limitations as well as to reduced risk of frailty.

For PRT the ceiling/maximum effect on muscle is reached only after quite high loads during longer periods of time, whereas intervention studies indicate that extra effects on muscle by nutrition are difficult to reach beyond adequate nutritional intakes. Nutrients like essential fatty acids; i.e. omega-3 and omega-6 fatty acids, and vitamin D are also likely to have muscle anabolic effects.

For the future pharmacological drugs may become a third treatment option. Current focus is on myostatin antibodies, selective androgen receptor modifiers (SARM) and ghrelin agonists.

Combined therapy including aerobic and resistance exercise, nutrition and perhaps complementary drugs is a potential remedy for sarcopenia and frailty.

**Keynote, fredag 17:15-18.00, Plenum**

---

## LØRDAG 14. APRIL



### Enhancing motor learning using virtual rehabilitation – new ways to deliver old tricks

*Mindy F. Levin, PT, professor, McGill University, Montreal, Quebec, Canada*

---

*Dr. Levin trained as a physiotherapist at McGill University and practiced for several years at the Rehabilitation Institute of Montreal where she specialized in neurological rehabilitation. She then obtained a M.Sc. degree in Clinical Sciences followed by a Ph.D. in Physiology.*

*Dr. Levin's research focuses on elucidating the mechanisms underlying arm sensorimotor deficits and their recovery in adults and children with central nervous system lesions. Her research program aims to elaborate the pathophysiological mechanisms underlying disordered motor control and learning after brain damage and then to develop and test treatment interventions to remediate sensorimotor impairments and disabilities based on these findings. Amongst her research methodologies are new technologies such as virtual reality and robotics.*

---

**The primary focus** of neurological rehabilitation is the re-acquisition of lost motor skills to improve independence in activities of daily living and quality of life. To achieve this, rehabilitation takes advantage of central nervous system neuroplasticity through motor learning mechanisms.

Mindy Levin describes how motor learning mechanisms can be addressed by creating enriched training environments using virtual reality (VR) based simulations. Motor control and motor learning principles related to the reacquisition of upper limb motor skills will be discussed in relation to how they can be exploited by VR training environments.

Key outcome measures identifies, and examples of how motor control and motor learning principles have been incorporated into different VR simulations for improving upper limb motor function and/or recovery will be provided. Finally, the effectiveness of current VR technologies, client suitability for the use of different learning approaches, and transfer of learning to daily life tasks will be discussed.

**Keynote, lørdag 9.00-9.45, Plenum**

---



## Spinal pain – when is it less about the spine and more about the person?

*Kieran O'Sullivan, PhD, Sports Spine Centre at Aspetar Sports Medicine and Orthopedic Hospital, Qatar*

*Dr. Kieran O'Sullivan is lead Physiotherapist at the Sports Spine Centre at Aspetar Sports Medicine and Orthopedic Hospital, Doha. He is also a senior lecturer in Physiotherapy at the University of Limerick.*

*He has been awarded specialist member status by the Irish Society of Chartered Physiotherapists. His research interest is musculoskeletal pain and injury, particularly persistent spinal pain. He has published one book, five book chapters and 90 journal articles and his research group disseminates its research through [www.pain-ed.com](http://www.pain-ed.com).*

**Clinicians will be** assisted in determining, when therapy should be more – or less – focused on treatment of local spinal tissues.

Spinal pain is a major cause of disability and healthcare utilization. Decades of chasing various pain 'sources' through ever-more sophisticated imaging modalities, investigative procedures and interventions has yielded little progress in clinical outcomes. A considerable body of scientific research helps explain, why this has been relatively unsuccessful. Pain is not very well correlated with tissue 'damage' and researchers, educators and clinicians are gradually spreading this message.

Two considerable challenges remain:

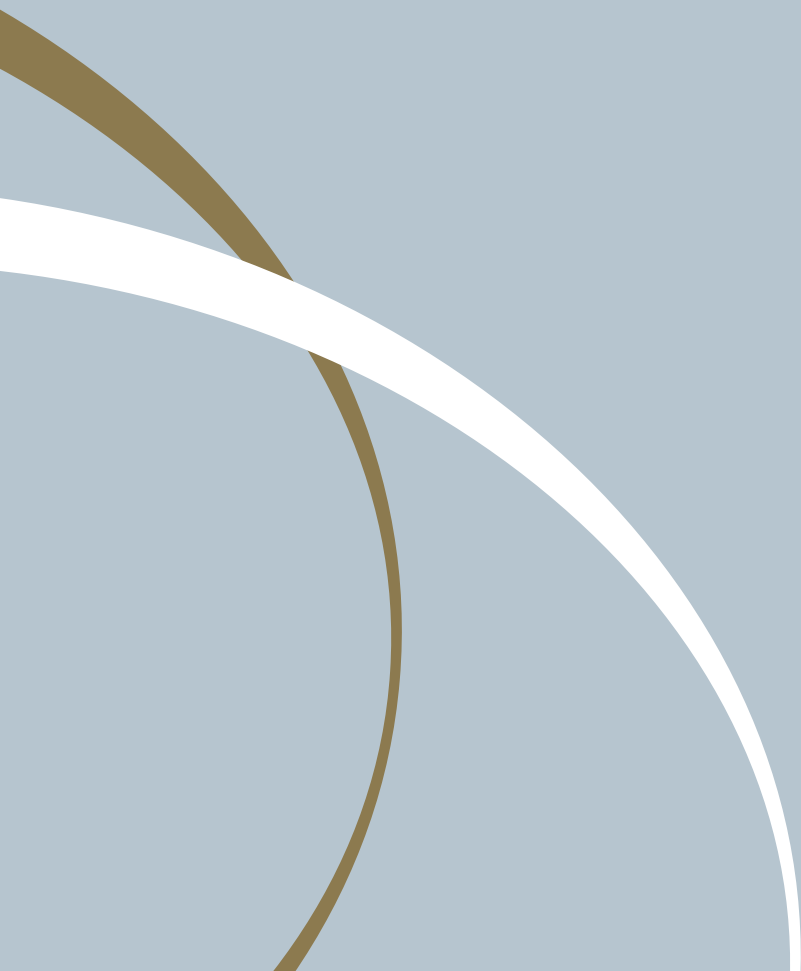
1. Trying to identify with confidence, when spinal pain is mostly related to local 'issues in the tissues', and when it is more closely connected with an altered sensitivity of the person, and
2. What is a "physical" therapist to do about contributing factors that might be less "physical" in nature while respecting professional boundaries, training and expertise?

Kieran O'Sullivan seeks to help clinicians identify the key barriers to pain among their patients, and how physiotherapists can play a role in either addressing these factors directly, or counselling patients to seek appropriate support elsewhere as needed.

**Specialist talk, lørdag 9.55-10.35, Sjælland**

# SYMPOSIER

—



## TORS DAG 12. APRIL

### Motivation and intensity of training – the neurological patient

*Mindy Levin, PT, Professor, McGill University, Montreal, Quebec, Canada*

*Iris Brunner, PT, associate professor, Hammel Neurorehabilitation Centre, Aarhus University*

*Lis Puggaard, cand. scient., ekstern lektor, PhD, Syddansk Universitet*

Gain knowledge on how to motivate patients, promote motor learning and raise intensity of training.

#### Focus will be on:

- Presentation on motor learning and recovery
- Repetition and variation in training
- Use of virtual reality and robotics in upper limb training
- How to promote neural plasticity and learning
- How to use implicit and explicit feedback
- How to promote motivation

The three speakers will have a 15-20 minute presentation each. After this, there will be room for questions and discussions.

#### Presentations

*Mindy Levin:* How motor learning mechanisms can be addressed by creating enriched training environments using virtual reality (VR) based simulations. Motor control and motor learning principles related to the reacquisition of motor skills will be presented and discussed in relation to how they can be exploited by VR training environments.

*Iris Brunner:* VR training as a tool for upper limb rehabilitation after stroke. Examples of recent research will be presented. VR for upper limb neurorehabilitation will be critically appraised in terms of opportunities and limitations.

*Lis Puggaard:* Theories on resource-oriented health pedagogy. Lis will focus on motivation, learning and compliance in neurorehabilitation and the most important contributions to mental and psychological health and the encouraging fact, that you can be sick and healthy at the same time. Based on Peter Thybo's most recent book *Det Dobbelte KRAM* from 2016.

Language: English

Symposium, torsdag 15.15-16.45, Odense

### Blood flow restricted exercise after surgery or disease: Adaptions, clinical efficacy and safety

*Dr. Jeremy Loenneke, assistant professor, the University of Mississippi, USA*

*Thomas Linding Jakobsen, PT, PhD, Section for Orthopaedic & Sports Rehabilitation, Copenhagen, Denmark*

*Thomas Bandholm, PT, professor, University of Copenhagen, Denmark*

The clinical evidence-based practice of blood flow restricted exercise after surgery and disease will be covered.

**Blood flow restricted** exercise has shown to increase muscle hypertrophy or strength early after surgery or disease. This training modality involves the application of a wrapping device such as an inflated tourniquet/cuff or a special designed strap to restrict the arterial inflow and venous outflow to muscles during exercise.

This means, that the patient can perform strength training with much lower loads than traditional strength training. A wide range of patient groups with weight bearing restrictions or articular joint pain may benefit from blood flow restricted exercise.

All presenters will engage in a debate following the talks, where there will be time for questions.

The symposium will be followed by a practical workshop, where blood flow restricted exercise will be demonstrated and practiced, so you can apply this new and exciting training modality in the clinic or the rehabilitation centre.

#### Presentations

*Jeremy Loenneke:* An up-to-date overview of blood flow restricted exercise entailing the physiological adaptations and mechanisms

*Thomas Linding Jakobsen:* The clinical evidence behind blood flow restricted exercise after surgery and disease and its implications for rehabilitation

*Thomas Bandholm:* An overview of safety aspects of blood flow exercise

Symposium, torsdag 15.15-16.45, Jylland

## Evidence-based clinical reasoning for exercises in rotator cuff related disorders

*Karen Ginn*, associate professor, PT, University of Sydney, Australia

*Ann Cools*, associate professor, PT, Gent University, Belgium and University of Copenhagen, Denmark

*Henrik Eshøj*, PhD, PT, Odense University Hospital, Denmark

*Kim Ingwersen*, PhD, PT, Hospital Lillebaelt, Vejle Hospital, Denmark

Focus on the shoulder has increased, specifically regarding the rotator cuff. Where are we now? Should we subgroup or not?

**The shoulder is** the future area of research for the musculo-skeletal system, and instability and tendinopathy are frequent in patients in physiotherapy practice. However, although several specific exercise programs exist on instability and tendinopathy for the knee, there is still none on the shoulder.

We still need more precise answers on the following key questions:

- What is the evidence for specific exercises for rotator cuff related disorders?
- What are the criteria for progression and how should the patients progress?
- Which outcomes should be used as effect measures?
- How can we use self-reported and ultrasound outcomes, and is there a link between these?

The symposium will include presentations and discussions in plenary.

### Presentations

Our speakers will present new knowledge and discuss aspects related to the following:

*Karen Ginn*: Functionally specific exercises for the treatment of shoulder instability

*Ann Cools*: What is the role of the scapula in shoulder instability rehabilitation?

*Henrik Eshøj*: Traumatic Anterior Shoulder Instability – which exercises? A randomised controlled trial

*Kim Ingwersen*: Ultrasound verified structural changes after specific exercises for patients with rotator cuff tendinopathy

**Symposium, torsdag 15.15-16.45, Sjælland**

## Assessment of physical performance in cardiac and pulmonary rehabilitation?

*Patrick Doherty*, professor, PT, University of York, United Kingdom

*Lars Tang*, postdoc, PT, REHPA, Denmark

*Henrik Hansen*, PhD student, PT, Research Unit for Chronic Diseases and Telemedicine, Denmark

Effect of exercise intervention and assessment of physical performance in pulmonary and cardiac diseases? Recommendations in hospital and community settings.

**Assessment of physical** performance in patients with cardiac or pulmonary disease is used before and after rehabilitation and in risk assessment. Assessments of physical performance are challenges due to a gap between international guidelines and easily applicable testing procedures in both hospital and community settings.

Get provided with evidence for exercise intervention and whether assessment of physical performance is important, a review of advanced and easily applicable measurements to assess physical performance and recommendations.

The lectures are followed by a discussion with participants, based on specific questions related to the main topics of the symposium.

### Presentations

*Henrik Hansen*: Effect of exercise intervention and assessment of physical performance in pulmonary disease?

*Lars Tang*: Effect of exercise and assessment of physical performance in cardiac disease?

*Patrick Doherty*: Rehabilitation assessment of physical fitness and outcomes in patients with a co-morbidity of CVD and COPD.

**Symposium, torsdag 15.15-16.45, lokale 24**

## Cancer rehabilitation

*Jessica Scott, PhD, Memorial Sloan Kettering Cancer Center, New York, NY*

*Kristin Campbell, PT, PhD, the University of British Columbia, Vancouver*

*Kira Bloomquist, PT, PhD student, Universitets Hospitalernes Center for Sundhedsfaglig Forskning, Rigshospitalet*

*Eik Bjerre, PhD student, PT, Universitetshospitalernes Center for Sundhedsfaglig Forskning, Rigshospitalet*

### Rationalet for fysisk aktivitet og træning i cancerrehabiliteringen samt generelle anbefalinger for planlægning og tilrettelæggelse af individuelle forløb af patienter med kræft. Hvorfor? Hvordan? Og hvor meget?

**Antallet af patienter** med kræft i Danmark og verden er en støt voksende gruppe med et unikt behov for funktionel, psykosocial og medicinsk støtte. Mange patienter med kræft oplever funktionstab og senfølger, som skyldes kræftsygdom og/eller kræftbehandling. Funktionstab og senfølger er rent faktisk problemstillinger, der kan løses gennem cancerrehabilitering og fysisk træning.

Når en patient med kræft skal henvises til rehabilitering, er det meget ofte personale med stor onkologisk ekspertise, der vurderer behovet for rehabilitering. Og af samme grund er fokus ikke på funktionsnedsættelse eller senfølger, men på mulige farmakologiske løsninger.

Ved at anvende de rette fagfolk til at vurdere behovet for rehabilitering af patienter med kræft, ville man kunne tilbyde ekspertise i funktionel vurdering samt tilrettelæggelse af individuelle forløb. Forløb med inddragelse af fysisk aktivitet i forebyggelse og lindring af funktionsnedsættelse og senfølger, som et optimalt supplement til det onkologiske team og den onkologiske behandling.

Den voksende evidens indenfor området peger entydigt på de gavnlige effekter, hvilket rejser nye problemstillinger. Hvorfor? Hvordan? Hvor meget?

### Præsentationer

*Jessica Scott:* Multi-system effects of cancer therapy and the role of exercise therapy

*Kristin Campbell:* How individualized and specific does the exercise prescription have to be in order to be beneficial?

*Kira Bloomquist:* Heavy load resistance exercise and risk of breast cancer related lymphedema

*Eik Bjerre:* Exercise in rehabilitation of patients with prostate cancer in Denmark

**Symposium, torsdag 15.15-16.45, lokale 26**

## Osteoporosis – the overlooked people's disease

*Magnus Bendtsen, candidate in sports, "Knoglestærk" – a clinic in Copenhagen*

*Simon Esrup, candidate in sports, "Knoglestærk" – a clinic in Copenhagen*

*Pernille Herman, Senior Surgeon, Odense University Hospital, Denmark*

*Dr. Emma Clark, Musculoskeletal Research Unit, University of Bristol, England*

*Lene Lebech, PT, Health Center Kolding, Denmark*

### Learn what to be aware of, and how to treat patients with osteoporosis with or without fractures. Discussion of evidence and best practice regarding patients with osteoporosis.

**It is estimated** that half a million Danes have osteoporosis, but only about 25% gets proper treatment. Patients with osteoporosis are in every practice, but do we know how to treat them – and how to find those patients, who should be examined.

Lots of patients with vertebral fractures are overlooked and mistreated for their back pain and patients with osteoporosis and fractures often have poor physical ability and a poor quality of life due to inactivity, social isolation and chronic pains.

*Focus will be on:*

- Preventive training – latest evidence and which exercises are adequate, when the patient has osteoporosis.

- Examination and treatment – latest knowledge and the latest recommendations within calcium and vitamin D.
- Reduced health-related quality of life can be addressed through a variety of evidence-based interventions. These will be discussed for people presenting with acute vertebral fractures, and for those with more chronic back pain and longer-standing vertebral fractures.
- Patient education – knowledge to ensure the patients can maintain activity of daily living and quality of life.

The lectures are followed by discussion with participants, based on specific questions related to the main topics of the symposium.

### Presentations

**Magnus Bendtsen and Simon Esrup** make high-intensive weight-bearing training in their clinic in Copenhagen to help their patients prevent osteoporosis. They will present the latest evidence in both prevention and treatment of osteoporosis within exercises.

**Pernille Hermann:** How to diagnose the patients with the newest technology and how to give them the best possible treatment to prevent fractures.

**Emma Clark:** Osteoporotic vertebral fractures are common and they identify people at a high risk of future fracture and with a reduced quality of life. However, less than a third of patients are correctly identified due to a variety of reasons. Emma will cover, who should be suspected as having a vertebral fracture and when to refer for diagnostic spinal radiographs.

**Lene Lebech:** There is a socio-economic gain in making a health-promoting effort for patients with osteoporosis. Lene will present, that 12 hours of dialogue based interdisciplinary effort can help the patients to maintain an active life in spite of their risk of fractures.

*Language: English*

**Symposium, torsdag 15.15-16.45, lokale 7-8**

## Fysioterapi og seksuel sundhed

*Kristina Areskoug Josefsson, PT, PhD, Jönköping University  
Cathrine Stenz, PT, master i sexologi, Hvidovre Hospital  
Helle Gerbild, PT, PhD student, Syddansk Universitet*

### Forskningsresultater og klinisk praksiserfaring gennemgås for at inspirere fysioterapeuter til at inddrage seksuel sundhed i deres professionsudøvelse.

**Mange sygdomme, symptomer** og sygdomsbehandling påvirker seksualiteten og har konsekvenser i form af seksuelle vanskeligheder og dysfunktioner, og patienterne efterspørger hjælp hos de sundhedsprofessionelle.

Fysioterapeutiske metoder virker fremmende på den seksuelle sundhed, og det er derfor oplagt, at fysioterapeuter i højere grad inddrager seksuelle sundhedsaspekter i deres intervention. I symposiet relateres forskning i seksuel sundhed til områder af fysioterapi og patient cases.

Der rejses følgende centrale spørgsmål, som drøftes ved diskussioner om seksuel sundhed i fysioterapeutisk klinisk praksis:

- Hvad er seksuel sundhed?
- Hvorfor skal fysioterapeuter arbejde med at fremme seksuel sundhed?
- Hvad efterspørger patienterne?
- Hvordan påvirker sygdom seksualiteten?
- Hvad kan jeg som fysioterapeut gøre for at fremme den seksuelle sundhed?

I forhold til det fysioterapeutiske arbejde med at fremme seksuel sundhed vil kliniske metoder ved følgende praktiske patienteksempler blive præsenteret og diskuteret:

- Kroniske smerter
- Rejsningsproblemer
- Smerter ved samleje

### Presentations

**Kristina Areskoug Josefsson:** Praktiske eksempler på hvordan reumatologisk sygdom påvirker seksuel sundhed og på hvilke måder fysioterapeuter kan fremme seksuel sundhed for patienter med smerter, bevægeindskrænkning og træthed.

**Cathrine Stenz:** Fysioterapeutisk behandling til kvinder med smerter ved samleje samt præsentation af resultater fra et kvalitativt pilotstudie om patienters oplevelse af behandlingen.

**Helle Gerbild:** Hvordan kan fysisk inaktivitet, overvægt og



hjerterproblemer påvirke mænds rejsningsevne og på hvilke måder kan fysioterapeuter vejlede i fysisk aktivitet og øvelser, der kan fremme rejsningsevnen for mænd med arterielt betinget erektil dysfunktion.

*Sprog: Dansk og svensk*

**Symposium, torsdag 15.15-16.45, lokale 9-10**

## When work hurts

*Lance McCracken, Professor of Behavioural Medicine, Kings College, London*

*Henrik Bjarke Vægter, post-doc, Odense University Hospital and University of Southern Denmark*

*Morten Alberg, fysioterapeut, Jobcenter Vesthimmerland, UCN, Professionshøjskolen UC Nordjylland*

**Get inspiration concerning tools to reduce the gap between healthcare and work, and to conceptualise work as a tool in the rehabilitation of people with chronic pain, rather than an end-goal.**

**Pain is the** leading reason for people to 'fall out' of the work force. In Denmark low-back pain causes 20% of all health-related retirements (førtidspension), and 1 in 5 of all people with musculoskeletal pain will be absent from work due to pain within a two-year period.

The toll on the individual and their families can be immense and the societal costs in social benefits and lost production in Denmark accumulate to 5 billion DKK yearly. This is contrasted by a contemporary understanding, that most jobs have a neutral effect on pain and a positive effect on quality of life.

### Presentations

**Lance McCracken:** Pain and work – Lost in translation?

"I don't feel quite ready to begin work, just yet" or "first I need to reduce my pain, then I will think about work," are statements that reflect a passive or avoidant situation and are unlikely to signal immediate engagement in work. Understanding avoidance, barriers to engagement, and ways to enhance motivation may help. To add to existing tools, it may further enhance outcomes if work can be framed as NOT requiring readiness, and as something that is not opposed by pain but can INCLUDE pain. Lance McCracken will present data, relevant concepts, and describe potentially useful methods.

**Henrik Bjarke Vægter:** What motivates patients with chronic pain to return to work?

Chronic pain has great consequences for the individual, not least on the ability to work. Although previous research has shown that working is beneficial for general well-being, very little research has focused on chronic pain patients' own perception about work and motivational aspects for a successful return-to-work process. Based on qualitative interviews with chronic pain patients Henrik Vægter will share insights on patients' own perception about work and motivational aspects for return-to-work to facilitate successful rehabilitation.

**Morten Alberg:** When the individual's work participation is challenged – what to do?

Morten Alberg will focus on how physiotherapists can support individuals who are at risk of sick leave and how to facilitate continued work participation through direct interaction with the individual, collaboration between health care and social services. This talk focusses on empirical evidence from extensive work with people who struggle to return to work due to pain, and specific ideas on what physiotherapists can do to facilitate better collaboration between the individual, health professionals and social services in order to get more people, faster back to meaningful work participation.

**Symposium, torsdag 15.15-16.45, Fyn**

## FREDAG 13. APRIL

### Optimeret belastning og forebyggelse af idrætsskader

*Kristian Thorborg, PT, lektor, Amager-Hvidovre Hospital, Københavns Universitet*

*Merethe Møller, PT, adjunkt, PhD, Syddansk Universitet*  
*Rasmus Ø. Nielsen, PT, post doc, Aarhus Universitet*

**Få en øget forståelse for betydningen af belastning som et nøglepunkt i klinisk praksis for forebyggelse, genoptræning og tilbage til sport.**

**Betydningen af belastning** og aflastning i forhold til udvikling af skader og i forbindelse med forebyggelse og genoptræning af idrætsskader er afgørende for at kunne optimere idrætsudøveres funktion i forbindelse med deres sport og dermed muligheden for at reducere deres risiko for skader og nedsat præstationsevne.

Få et specifikt indblik i, hvordan skader kan forebygges gennem overvejelser og tiltag inden præstationen for at optimere belastningen hos den enkelte atlet. Specielt indenfor nogle af de største idrætsgrene herhjemme, nemlig løb, håndbold og fodbold.

Betragtninger i forhold til både eliteudøvere og motionister vil blive inkluderet og populations- og idrætsspecifikke mekanismer vil blive diskuteret i forhold til generaliserbarhed og anvendelighed hos klinikere, trænere og idrætsudøvere i deres hverdag.

Symposiet er organiseret af Dansk Selskab for Sportsfysioterapi.

#### Præsentationer

*Kristian Thorborg:* Optimeret belastning forhold til forebyggelse og genoptræning af overbelastningsskader  
Betydningen af forebyggelse og tidlig identificering af overbelastningsproblematikker.

*Merethe Møller:* Belastningens betydning for udvikling af skader i håndbold

*Rasmus Ø. Nielsen:* Løbeskader – skal de løbes væk?  
Et perspektiv på sammenhængen mellem årsager, forebyggelse og behandling af løbeskader.

**Symposium, fredag 14.45-16.15, Plenum**

### Spinal pain: Myths, facts and treatment strategies

*Steffan Wittrup Christensen, PT, PhD, SMI, Institut for Medicin og Sundhedsteknologi, AAU*

*Thorvaldur Skuli Palsson, PT, PhD, SMI, Institut for Medicin og Sundhedsteknologi, AAU*

*Lars Henrik Larsen, PT, PhD student, Fysioterapi-uddannelsen, UCN*

*Anneli Peolsson, professor, Dep. Medical and Health Sciences, Linköping University, Sweden*

*Kieran O'Sullivan, PhD, Sports Spine Center, Aspetar, Qatar*

**Get an overview of the state-of-the-art knowledge on neck and low back pain as well as an outline of relevant rehabilitation strategies within an evidence-based framework.**

**Spinal pain poses** a significant economic burden on the sufferers as well as the society, and is the most common reason for people seeking help within the healthcare system in Denmark. With this in mind, research has focused on spinal pain covering everything from basic pain mechanisms to implementing new treatment and management strategies.

Firstly, the latest knowledge on the mechanisms underlying spinal pain will be summarized and how these may contribute to the overall clinical picture.

Secondly, the focus will be on the latest advances in evidence-based treatment strategies for neck and low back pain.

The purpose of the symposium is to reduce the gap between research and clinical practice by linking basic science to clinical findings and management strategies. And possible explanation models and treatment strategies that can be implemented in clinical practice will be outlined.

All presenters are involved in clinical research on the presented topics. Therefore, the emphasis will be on the clinical relevance of the current research literature and how it may be used to guide clinical practice.

#### Presentations

*Steffan Wittrup Christensen:* The effect of neck pain on motor function

*Thorvaldur Skuli Palsson:* The effects of low back and pelvis girdle pain on pain sensitivity

*Lars Henrik Larsen:* The effects of low back pain on motor function

*Anneli Peolsson:* Treatment of neck pain – whats new?

*Kieran O'Sullivan:* Treatment of low back pain – whats new?

**Symposium, fredag 14.45-16.15, Jylland**

## Early out of bed mobility

**Morten Tange Kristensen**, PT, PhD, Amager-Hvidovre Hospital, University of Copenhagen, Denmark

**Line Rokkedal Jønsson**, PT, Master in rehabilitation, Amager-Hvidovre Hospital, Denmark

**Julie Bernhardt**, PT, professor at The FLOREY Institute of Neuroscience and Mental Health, Australia

**Simon Svanborg Kjeldsen**, PT, Research physical therapist, Regionshospitalet Hammel Neurocenter, Denmark

Discussion of evidence regarding early mobilisation in patients with different diagnoses and elaboration on dilemmas regarding these patients and how to establish evidence-based practice within the field of early mobility.

Since the late sixties, there has been an increased focus on the negative side effects of bed rest. Pioneer work from Denmark within fast-track surgery has inspired the clinical guidelines for mobilising patients, with the Danish Multidisciplinary Hip Fracture Database emphasizing mobilisation within 24 hours after surgery.

The Danish National Indicator Project has focused on early examination (and perhaps mobilisation) for patients with acute stroke, giving early mobilisation a prioritised focus among physical therapists. More effective treatment at the intensive care units and on critically ill patients is making room for physical therapists to intervene early and more research is now carried out within this field.

Focus will be on the following:

- Evidence for or against early mobility
- The rationale behind early mobility
- Considerations on timing and dose in early mobility
- Methodological issues in performing studies on early mobility
- Recommendations for future research
- Clinical applicability of early mobility
- Patients with stroke, hip fracture, acute high-risk abdominal surgery and severe acquired brain injury

The speakers will represent three clusters. Each cluster will have 20-25 minutes for presentation. Afterwards, there will be room for questions and discussions.

### Presentations

**Morten Tange and Line Rokkedal:** Patients following acute fast-track hip fracture and acute high-risk abdominal surgery. Their talk will focus on clinical experience and research.

**Julie Bernhardt:** As a main contributor of the "A Very Early Rehabilitation Trial" (AVERT) on stroke patients, the largest early mobility study conducted, Julie Bernhardt will present the results of this study as well as pre-specified post hoc analysis.

**Simon Svanborg Kjeldsen:** Since 2008 patients with severe acquired brain injury have had the opportunity to receive earlier rehabilitation efforts at the intensive care unit at Silkeborg Hospital, Denmark, before receiving further specialized rehabilitation at Hammel Neurocenter. Simon Svanborg Kjeldsen will elaborate on observational data and experiences in delivering an early mobility regime.

Language: English

Symposium, fredag 14.45-16.15, Sjælland

## Ultrasound imaging: Evidence and clinical practice

**Lorenzo Masci**, Consultant in Sports and Exercise Medicine, Pure sports medicine and ISEH, London

**Stuart Wildman**, PT, MSK Sonographer, Homerton University Hospital, London

**Karen Ellegaard**, PT, PhD, The Parker Institute, Copenhagen University Hospital

Learn about evidence for the use of ultrasound, ultrasound imaging in diagnostics, physiotherapy and a rheumatology setting, and indications and contraindications of ultrasound imaging.

**Highlighted will be** the clinical application of ultrasound imaging with presentations from national and international clinicians with substantial experience in ultrasound imaging. The indications for ultrasound imaging in diagnostics and treatment will be presented with an evidence-based approach. Furthermore there will be emphasis on clinical reasoning as an underlying base for the ultrasound examination and on the implications for the patient's treatment course.

Musculoskeletal ultrasound imaging is becoming increasingly popular in the physiotherapy practice, both in the outpatient clinics with diagnostic functions and in physiotherapy practice in private as well as in municipal settings. Conducted by an adequate skilled professional, ultrasound imaging is quick, easy to use and has lower costs than other

imaging modalities. It has great potential and looking at our neighbors in England, they have already succeeded in implementing ultrasound in the physiotherapy practice.

After each session there will be time for questions from the audience. Finally, we will debate how physiotherapists can use ultrasound imaging, how we facilitate implementation and how to ensure high quality in the physiotherapy practice.

Organizer: Danish Association of Sports Physiotherapy.

### Presentations

**Lorenzo Masci:** The role of ultrasound imaging in musculo-skeletal diagnostic and treatment.

- Basic introduction to ultrasound imaging.
- Introduction to existing research for ultrasound imaging.
- Clinical usefulness and possible pitfalls in using ultrasound in tendinopathy.
- Pros and cons compared to other imaging modalities.

**Stuart Wildman:** Clinical reasoning in the ultrasound imaging of the shoulder – Implications for the patient journey.

- Introduction to what we can see in the shoulder
- The painful shoulder and ultrasound findings
- Asymptomatic findings on imaging
- Indications and contraindications for ultrasound imaging of the shoulder

**Karen Ellegaard:** Ultrasound imaging for assessment of the inflammatory conditions in joints and tendons. Reliability and validity in a rheumatology setting.

- Gray scale vs. doppler in the rheumatologic patient
- Ultrasound as an examination feature to organize and monitor the physiotherapeutic intervention
- Ultrasound as a tool to insure that an intervention does not increase inflammation and course tissue damage.

### Symposium, fredag 14.45-16.15, Fyn

## The use of intervention studies in planning evidence-based interventions for the individual child – from research to clinical practice

*Dr. Diane L. Damiano, PT, PhD, National Institute of Health, Maryland, USA*

*Derek Curtis, PT, PhD, adjunkt, Professionshøjskolen Metropol*

*Michelle Stahlhut, PT, PhD student, Kennedy Centret, Rigshospitalet*

The participant will get an insight into the challenge of using studies presenting group outcomes in planning interventions for individual children in clinical practice, illustrated using recently published studies in children with severe disabilities.

**In pediatrics there** is debate concerning the applicability of clinical studies for planning interventions for the individual child. The Danish National Clinical Guidelines for Physical and Occupational Therapy for children with cerebral palsy make only weak recommendations for and against interventions based on the results of traditional RCT studies.

Therefore, a different approach to reporting the results of studies is needed, if these are to be used in planning evidence-based efforts for the individual child. It is proposed, that researchers, in addition to the average progress at the group level, also carry out analyses of subgroups and report the results and characteristics of the individual participants or children included in the study.

The problem will be presented and illustrated using results from clinical trials investigating effects of interventions for children with disabilities and examples of subgroup analysis and participants with very little and very large effects of the interventions studied.

Presenters will discuss the impact of their results and the subgroup analysis in relation to evidence based decision-making in clinical practice.

Symposium organized by The Danish Association of Physical Therapy in Pediatrics.

### Presentations

**Diane L. Damiano:** Meaningfulness of mean group results for determining the optimal motor rehabilitation program for an individual child with cerebral palsy. Introduction to the topic

**Derek Curtis:** The functional effect of segmental trunk and head control training in moderate-to-severe cerebral palsy: A randomized controlled trial

**Michelle Stahlhut:** Feasibility and effectiveness of an individualized 12-wk 'up-time' participation intervention (U-PART) in girls and women with Rett syndrome

**Symposium, fredag 14.45-16.15, lokale 24**

## Patienters, pårørendes og personalets opfattelser af fysisk aktivitet og mobilisering under indlæggelse

*Jeanette Wassar Kirk, sygeplejerske, postdoc, Klinisk Forskningscenter, Amager-Hvidovre Hospital*  
*Jane Andreassen, PT, PhD, Aalborg Universitetshospital*  
*Camilla Rams Rathleff, PT, cand. scient., Aalborg Universitetshospital*

Symposiet har fokus på betydningen af tværprofessionelt samarbejde samt kultur- og patientperspektiver for implementering af interventioner, der skal øge fysisk aktivitet for ældre patienter.

**Behandling af mobilitetsbegrænsninger** og fysisk inaktivitet anses for at være en kerneopgave for fysioterapeuter, der arbejder med ældre patienter. Imidlertid viser studier, at en række barrierer er knyttet hertil.

Der præsenteres resultater fra tre kvalitative forskningsprojekter, som belyser det komplekse i at implementere interventioner målrettet det at øge fysisk aktivitet hos ældre patienter.

Oplæggene lægger op til en fælles debat af, hvordan det fysiske aktivitetsniveau blandt indlagte ældre patienter kan øges, og hvilke strategier der i den forbindelse bør overvejes.

### Presentations

**Jeanette Wassar Kirk:** Fysisk aktivitet under en akut medicinsk indlæggelse: Hvem understøtter det?

Resultater og fund fra observationsstudier foretaget i 6 medicinske afdelinger på hospitaler i Region Hovedstaden som del af projektet WALK-Copenhagen. Formålet med observationerne er at iagttage, forstå og komme med bud på, hvordan fysisk aktivitet forekommer i dagligdagen i de medicinske hospitalsafdelinger, herunder: Hvordan handler, agerer og taler læger, sygeplejersker, social- og sundhedsassistenter samt fysio- og ergoterapeuter om fysisk aktivitet. Hør om fremmere og barrierer for fysisk aktivitet, forskelle i professionsforståelser og identiteter, tværprofessionelt samarbejde og kulturelle modeller.

**Jane Andreassen:** Patienter og personales oplevelse af deltagelse i et implementeringsstudie omhandlende træning og ernæring på et infektionsmedicinsk afsnit.

Erfaringerne med implementering af en helhedsorienteret trænings- og ernæringsindsats til patienter indlagt på et infektionsmedicinsk afsnit på Aalborg Universitetshospital. Fokus er på patienters og personales oplevelser og erfaringer med indsatsen, og hvorledes både fremmede faktorer som barrierer har betydning for indsatsens gennemslagskraft, kvalitet og overlevelse. Fremmede faktorer og barrierer oplevedes på såvel intra- og interpersonelt niveau som på organisatorisk- og kulturelt niveau. Hør hvorledes erfaringerne fra ovenstående projekt har haft betydning for organisatoriske tiltag fremadrettet i forhold til fysisk aktivitet og træning til indlagte medicinske patienter.

**Camilla Rams Rathleff:** Hvor meget selvtræner skrøbelige geriatriske patienter under indlæggelse? Patienter og sundhedspersonales oplevelse af selvtræning med elastik.

Resultater og fund fra oplægsholders nyligt udførte feasibility studie omhandlende selvtræning med elastik udført af indlagte skrøbelige geriatriske patienter. Studiet undersøgte mængden af selvtræning samt hvordan både patienter og sundhedspersonale på den geriatriske afdeling forholdt sig til selvtræningen. Temaer er hovedsageligt fysisk aktivitet, sundhedsteknologi og geriatriske patienter.

**Symposium, fredag 14.45-16.15, lokale 26**

## Multipel Sclerose: Rehabilitering i Danmark, træningsanbefalinger og anbefalede måleredskaber

*Anders G. Skjerbæk, fysioterapeut og udviklingsleder for Sclerosehospitalerne i Danmark*

*Ulrik Dalgas, idrætsfysiolog og lektor, Aarhus Universitet*

*Peter Feys, fysioterapeut, professor ved University of Hasselt, Belgien*

**Bliv opdateret på kompleksiteten ved MS og rehabiliteringsprincipper i Danmark, og vær med til at diskutere de gældende anbefalinger og evidensen bag samt de sklerose-specifikke målemetoder, som kan anvendes i klinisk praksis.**

**Danmark har verdens 3. højeste forekomst af MS, og i 2017 forventes antallet af danske tilfælde at overstige 15.000.**

Forekomsten er stærkt stigende og omkostningerne for de der er berørt af MS samt for samfundet er enorme.

Mennesker med MS har et livslangt behov for fysisk aktivitet, som både kan begrundes i de direkte og de indirekte virkninger af sygdommen. Mennesker med MS har behov for "fysisk robusthed" til at modstå følgerne af sygdommen og til at kunne genoprette et tilfredsstillende fysisk og mentalt niveau efter attacker. Samtidig medfører sygdommen hos mange ufrivillig inaktivitet, som også øger forekomsten af sekundære livsrelaterede lidelser.

Sygdommen udvikler sig forskelligt, og fysioterapeuter i alle sektorer møder mennesker med MS, fra den nydiagnosticerede og velfungerende til personen med fremskreden MS, som har svær invaliditet og et stort hjælpebehov. Behovet for rehabilitering opstår som følge af udviklingen af sygdommen, og fysioterapeuter er ofte en del af den multidisciplinære indsats, der skal give mennesker med MS de bedste muligheder for at leve et meningsfuldt og uafhængigt liv.

Det er nødvendigt, at fysioterapeuter kan identificere og handle på de forandringer, som følger sygdomsudviklingen og på den baggrund kvalificeret udvælge målbare og effektive behandlings- og træningsindsatser.

### Presentations

**Anders G. Skjerbæk:** Rehabilitering og fysioterapi til mennesker med MS – herunder danske erfaringer

**Ulrik Dalgas:** Fysisk træning til mennesker med MS – anbefalinger og evidensen bag

**Peter Feys:** Outcome measures in MS – recommendations for clinical practice

**Symposium, fredag 14.45-16.15, Odense**

## LØRDAG 14. APRIL

### Aktiv behandling af muskuloskeletale smerter med fokus på behandlingsprogression og træningsdosering

*Kristian Thorborg, PT, lektor, Amager-Hvidovre Hospital*

*Michael Rathleff, PT, lektor, Aalborg Hospital*

*Henrik Riel, PT, PhD student, Aalborg Hospital*

*Mikkel Bek Clausen, PT, PhD student, Amager-Hvidovre Hospital*

*Rasmus Skov Husted, PT, PhD student, Amager-Hvidovre Hospital*

**Få ny viden og ideer til praktiske tiltag i forhold til, hvordan man med en aktiv behandlingsstrategi kan forbedre funktionsniveau og livskvalitet for patienter med muskuloskeletale smerter, samt øge deres evne til selv at tage hånd om problemet i fremtiden.**

**Smerter i bevægeapparatet** er en af de hyppigste årsager til at patienter opsøger fysioterapeut i det danske sundhedssystem. En systematisk oversigtsartikel og meta-analyse fra Danmark nyligt publiceret i British Journal of Sports Medicine viser, at træningsterapi ser ud til at være den fysioterapeutiske intervention, som har bedst dokumenteret effekt på smerter i bevægeapparatet.

Vi sætter fokus på nogle af de aktive træningsterapeutiske behandlingstilgange, som umiddelbart har den bedste dokumentation i forhold til behandling af forreste knæsmarter hos børn og unge, skuldersmerter hos voksne og midaldrende, samt knæ-artrose hos den midaldrende og ældre befolkning.

Talene præsenterer information om, hvordan fysioterapeuter sikrer optimal planlægning og udførelse af effektfulde behandlingsalgoritmer og træningstilgange i forhold til disse patientgrupper. Der vil være specifikt fokus på nuværende og fremtidige behandlingsprincipper, inklusiv teknologi-understøttede løsninger og muligheder i forhold til at optimere patientuddannelse, hjemmetræning og compliance hos den enkelte patient.

Den nyeste forskning indenfor behandlingsprogression og træningsdosering til udvalgte grupper med muskuloskeletale smerter gennemgås. Inkluderet er problemstillinger indenfor tre forskellige alderssegmenter, og derfor kommer vi bredt omkring, hvordan fysioterapeuter kan tilgå forskellige patienter med smerter i bevægeapparatet med en evidensbaseret tilgang, samt lægger op til diskussion om, hvordan dette bedst muligt implementeres i klinisk praksis.

### Presentations

**Kristian Thorborg:** Behandlingsalgoritmer og træningsdeskriptorer – hvad er meningen?

**Michael Rathleff:** Behandling af børn og unge med knæsmarter efter en belastningsbaseret algoritme

**Henrik Riel:** Teknologiunderstøttet genoptræning til muskulo-skeletale smerter – elastikker og iPads

**Mikkel Bek Clausen:** Over- eller underbelaster vi vores skulder impingement patienter med træning?

**Rasmus Skov Husted:** 1 hård øvelse til patienter med knæartrose – er det nok?

**Symposium, lørdag 9.55-11.25, Plenum**

## What is sarcopenia and how can we handle it?

*Tommy Cederholm, professor of clinical nutrition, Uppsala University Hospital, Sweden*

*Morten Tange Kristensen, PT, PhD, Amager-Hvidovre Hospital, University of Copenhagen, Denmark*

*Niklas Grundt Hansen, PT, MSc, Ishøj Municipality, Capital Region, Denmark*

The symposium will provide easily applicable measurements to assess signs of sarcopenia in clinical practice, recommendations for protein and nutrient interactions to counteract sarcopenia and evidence of specific physical exercise interventions for treating sarcopenia.

**Sarcopenia is the** combined presence of reduced muscle mass, muscle strength and function, which mainly comes with ageing, disease and sedentarism. It is reported for almost one-third of community dwelling elderly people. Recent estimates indicate, that more than 50% of people, 80 years or older, could be affected by sarcopenia.

It is associated with increased odds of loss of physical function and independence, falls and fractures, and in the worst case scenario death. In addition, sarcopenia related health care costs are already extensive, and expected to rise with the continued increase of older people.

Positively, protein, other nutrient and exercise interactions seem to be able to counteract sarcopenia or even improve the muscle status of people already suffering from sarcopenia. However, the first step is to diagnose people with sarcopenia, and several tools have been suggested to assess muscle mass, muscle strength and physical performance in clinical trials. Whilst these tools have proven to be

accurate and reliable in investigational settings, many are not easily applied to daily practice.

The lectures are followed by discussion with participants, based on specific questions related to the main topics of the symposium.

### Presentations

**Tommy Cederholm:** The etiology of sarcopenia and recommendations for protein and nutrient interactions to counteract and treat sarcopenia

**Morten Tange Kristensen:** Easily applicable measurements to assess signs of sarcopenia in daily clinical practice

**Niklas Grundt Hansen:** Which specific physical exercise interventions has proven effective for treating sarcopenia?

**Symposium, lørdag 9.55-11.25, Fyn**

## Fysioterapi til patienter med PTSD – psykiatri eller somatik?

*Lene Nyboe, fysioterapeut, PhD, Forskningsenheden for Depression og Angst og Klinik for PTSD, AUH, Risskov*

*Samuel Olandersson, fysioterapeut, Klinik for PTSD, AUH, Risskov*

*Lissi Thomsen Rikken, fysioterapeut, Klinik for PTSD, AUH, Risskov*

**Få mere viden om PTSD og de kropslige problemstillinger, der knytter sig dertil, herunder samtidig somatisk sygdom og smerter samt PTSD i et arbejdsrelateret perspektiv.**

**Det er velkendt,** at mennesker, der har været udsat for traumatiske begivenheder efterfølgende kan udvikle posttraumatisk stress disorder (PTSD). Der er en stigende anerkendelse af, at forskellige livsbegivenheder kan være traumatiserende, eksempelvis begivenheder i relation til arbejde – såkaldt arbejdsrelateret PTSD.

Mennesker med PTSD har et generelt forøget arousal-niveau og som følge heraf en række kropslige gener og symptomer. Det drejer sig typisk om søvnløshed, påvirket respiration og forøget muskulær spænding, med heraf følgende ændret bevægelsefunktion og kroniske smertelager. Nyere forskning viser desuden, at mennesker med PTSD har en øget forekomst af samtidig somatisk sygdom sammenlignet med baggrundsbefolkningen.

Det er sandsynligt, at fysioterapeuter, uanset hvor i sundhedsvæsenet de arbejder, møder mennesker med PTSD, og det er derfor vigtigt at have en grundlæggende viden om PTSD og behandling heraf.

### Presentations

**Lene Nyboe:** PTSD – epidemiologi, symptomatologi og somatisk sygdom.

Præsentation af nyeste forskningsbaseret viden om forekomst af PTSD, kropslige symptomer, samtidig somatisk sygdom samt særlige risikogrupper i forhold til arbejdsrelateret PTSD. Lene har publiceret: Bodily symptoms in patients with post traumatic stress disorder. A comparative study of traumatized refugees, Danish veterans and healthy controls. J Bodyw Mov Ther. 2017 Jul;21(3):523-7.

**Samuel Olandersson:** PTSD og kronisk smerte – fysioterapeutisk udredning og behandling

Med baggrund i viden om neurofysiologi ved PTSD og kronisk smerte diskuteres, hvordan disse gensidigt forstærker og påvirker hinanden, samt hvordan fysioterapeutisk udredning og behandling med fordel kan tage afsæt heri. Samuel vandt en 1. præmie for dette oplæg ved ICPPMH i Madrid i 2016.

**Lissi Thomsen Rimmen:** Arbejdsrelateret PTSD. Fysioterapeutisk udredning og behandling

Med udgangspunkt i patienthistorier og praktiske øvelser præsenteres erfaringer fra fysioterapeutisk udredning og behandling af patienter med arbejdsrelateret PTSD. Lissi har mange års klinisk erfaring med behandling af PTSD.

**Symposium, lørdag 9.55-11.25, lokale 26**

## Rehabilitation for patients with pulmonary embolism

**Nanna Rolving, PT, PhD, Silkeborg Regional Hospital**

**Jenny Danielsbacka, PT, PhD student, Sahlgrenska, Göteborg, Sweden**

**Anette Arbjerg Højen, nurse, PhD, Aalborg University Hospital**

**Jannie Rhod Bloch-Nielsen, PT, Regional Hospital Silkeborg**

### What are the physical consequences of a pulmonary embolism?

How do the patients experience the psychosocial consequences? What is the role of the physiotherapist and what can we do to help the patient? What tools do we have?

**In Denmark, rehabilitation** is not part of standard care for patients following pulmonary embolism, unlike the case for patients with a myocardial infarction. Health professionals' experience in practice is that the patients have many questions and worries concerning physical and psychosocial issues.

Both on a national and an international level this seems to be an overlooked patient population, and no guidelines exist regarding rehabilitation in this field.

Following the presentations, a plenary debate will discuss the results of existing knowledge and presently ongoing research, including the experience with the patient population of the symposium attendants. Finally, we put future rehabilitation recommendations into perspective.

### Presentations

**Nanna Rolving:** What do we know about the safety and effectiveness of rehabilitation following pulmonary embolism?

Brief survey of the existing literature in the field.

**Jenny Danielsbacka:** Why do physiotherapists need to meet patients with acute pulmonary embolism?

Clinical discussion about the role of physiotherapists in the examination and guidance of patients hospitalised with a pulmonary embolism. Including a presentation of the study "Lung function, functional capacity and respiratory symptoms at discharge from hospital in patients with acute pulmonary embolism. A cross-sectional study".

**Anette Arbjerg Højen:** The psychosocial consequences of a pulmonary embolism in young adults

Presentation of a mixed methods study, investigating the mental well-being in adolescents and young adults with pulmonary embolism and deep vein thrombosis.



**Jannie Bloch-Nielsen:** From a clinical problem to a multi-center RCT

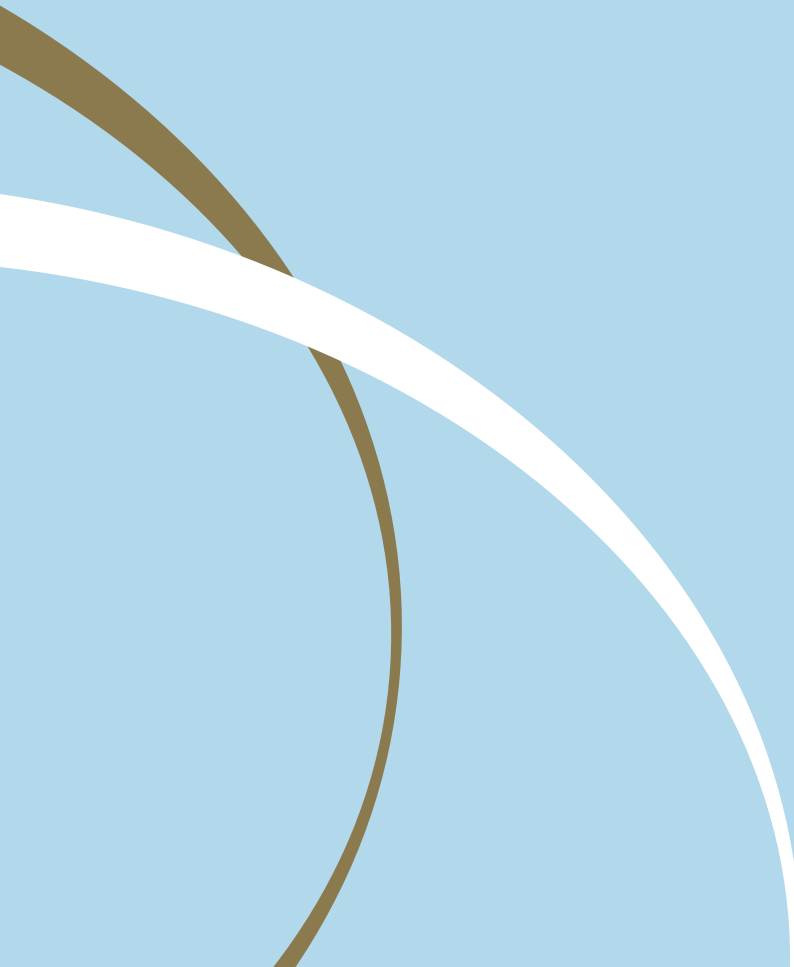
"I am afraid that I will be struck by pulmonary embolism again"; "Is it safe to exercise?"; "Who will take charge of me?" These questions and worries are a strong presence in the patients. How do the experiences of patients become an RCT study? A description of how a clinical problem develops into a large multicenter study.

*Language: English*

**Symposium, lørdag 9.55-11.25, Odense**

# WORKSHOPS

—



## TORS DAG 12. APRIL

### Aktiv og gravid – hvor meget og hvor lidt?

*Jannie Schmidt, lektor, Fysioterapeutuddannelsen UCN  
Josephine Nielsen, adjunkt, Fysioterapeutuddannelsen UCN*

Relevant evidens indenfor området fysisk aktivitet og graviditet. Diskussion omkring det fysioterapeutiske virke i svangreomsorgen, og demonstration af praktiske øvelser anvendt i et aktuelt projekt.

**Sundhedsstyrelsen anbefaler fysisk** aktivitet som en naturlig del af den normale og ukomplicerede graviditet. Klinisk professor Bente Klarlund Petersen tager anbefalingen videre og fastslår: "Det er en trussel for både barnet og moderens sundhed, hvis kvinden er i dårlig form, når hun bliver gravid og undlader at dyrke motion under graviditeten".

Komplikationerne som følge af en inaktiv graviditet er mange, eksempelvis bækkensmerter, graviditetsdiabetes, svangerskabsforgiftning, mistrivsel ved barnet samt følge-virkninger.

Rådgivning i fysisk aktivitet er en af fysioterapifagets kernekompetencer, men i hvilket omfang den gravide skal dyrke fysisk aktivitet og ved hvilken intensitet kan dog alligevel skabe en del usikkerhed hos de gravide kvinder, pårørende og de involverede sundhedsfaglige personale-grupper.

Internettet er fyldt med myter og usandfærdige amme-stuehistorier omkring fysisk aktivitets skadende effekter på fertiliteten og fosteret. Det kan derfor være svært for de gravide at navigere i den store strøm af "viden".

Fysioterapeutuddannelsen og forskningsprogrammet "Teknologier i borgernær sundhed" på University College Nordjylland har derfor i samarbejde startet udviklings-projektet "Aktiv og Gravid", hvor fokus var på at fremme og understøtte de gravides viden og forståelsen af fysisk aktivitet under svangerskabet.

To fysioterapeuter deltog i fire undervisningsgange i den etablerede svangerskabsomsorg i Aalborg Kommune kaldet "Hånd Om Barnet". Normalt er fysioterapeuter ikke en del af den ukomplicerede svangreomsorg, hvorfor dette tiltag er noget nyt. Hør om projektet og de mange spændende frem-tidsperspektiver til gavn for både samfund og den enkelte lille ny familie.

**Workshop, torsdag 11.45-12.30, Plenum**

### Klinisk bevægelsesanalyse – subjektive og objektive analysemetoder i relation til muskuloskeletale problematikker

*Lars Henrik Larsen, ph.d.-studerende ved Center for  
Sansemotorisk Interaktion, Aalborg Universitet*

Fokus på funktionsundersøgelse og bevægelses-analyse i relation til komplekse muskuloskeletale problemstillinger og illustration af udfordringer, metoder og innovative tilgange i progressiv klinisk praksis og forskning.

**Trods WCPT's definition** af BEVÆGELSE som det centrale fokus i fysioterapi, nedprioriteres bevægelse og funktion ofte i klinisk muskuloskeletal undersøgelse for mere vævs-strukturelle tilgange.

Observationer fra praksis og vurdering af forskningen ty-der på, at mangel på viden, kompetencer og anvendelige modeller i klinisk praksis udfordrer analyse af motorisk kontrol og mekanisk belastning som primære eller mulige årsager til udviklingen af en række muskuloskeletale belastnings- og smerterelaterede problematikker.

Der tages afsæt i en overbelastningsskaded løber, og del-tagerne inddrages i en fælles klinisk ræsonneringsproces gennem case-arbejde med subjektive og objektive analyser af subjektive og objektive kliniske parametre.

Deltagernes vurderinger inddrages gennem app-teknologi og dialog, og der vises data fra Bevægelaboratoriet, UCN Fysioterapeutuddannelsen, til at understøtte analyser og facilitere diskussion af:

- Udfordringer og styrker af bevægelses- og funktionsrelat-erede kliniske undersøgelser.
- Sammenhænge og divergenser i subjektive og objektive metoder.
- Konkret praksisudvikling og barrierer for denne.

**Workshop, torsdag 15.15-15.55, Plenum**

## Dynamometri – en nem og brugbar metode til en objektiv måling af muskelstyrke

*Andre Niemeijer, fysioterapeut, examMPT, FysioDanmark, Maribo*

*Kristian Thorborg, lektor, ph.d., specialist i idrætsfysioterapi, Amager-Hvidovre Hospital, Københavns Universitet*

**Introduktion til dynamometri. Hvad er det og hvordan fungerer det? Demonstration af dynamometri på skulder- og hoftemuskler samt afprøvning for deltagerne.**

**Muskelstyrke anses for** at være en vigtig komponent i ADL, arbejdsrelaterede aktiviteter og idrætsaktiviteter. Muskelstyrken kan ændres grundet aldring, patologi eller skader.

Fysioterapeuter benytter muskelstyrketest i forbindelse med planlægning og tilrettelæggelse af målrettede interventioner. I processen med klinisk ræsonnering kan kvantificering af muskelstyrke hjælpe fysioterapeuten med at træffe valg af intervention eller monitorere fremskridt.

Muskelstyrke kan kvantificeres på forskellige måder. De fleste fysioterapeuter har kendskab til 0-5 skalaen, som desværre har vist sig ikke at være reliabel i alle tilfælde. En måling af muskelstyrke med dynamometer er en low tech og nem måde at indsamle data på. En valid metode til kvantificering af muskelstyrke.

På workshoppen præsenteres målemetoden og der bliver mulighed for at afprøve dynamometer i mindre grupper.

**Workshop, torsdag 16.00-16.45, Plenum**

## Bliv endnu bedre til at anvende Gross Motor Function Measure til børn med cerebral parese

*Kirsten Nordbye-Nielsen, fysioterapeut, specialist i Pædiatrisk Fysioterapi, ph.d.-studerende og regional koordinator for CPOP i Region Midtjylland, Aarhus Universitetshospital*

*Lone Nielsen, fysioterapeut, Børnecenter København*

**Afprøvning af hvordan udvalgte opgaver fra testen scores, både simple og mere komplekse opgaver. Drøftelse af deltagerne erfaringer med anvendelse af testen i klinisk praksis, herunder fysioterapeutens rolle i testsituationen og hvordan testens resultater kan bruges i planlægning af indsatser.**

**Fysioterapeuters kvalitative observationer** og vurdering af patienterne bør suppleres med anvendelse af standardiserede/validerede måleredskaber for at følge den enkelte patients udvikling og til dokumentation af de fysioterapeutiske indsatser.

Børn med cerebral parese vil i løbet af barndommen udvikle nye motoriske funktioner med forskellig hastighed, afhængig af alder og funktionsniveau. For at følge barnets udvikling, anbefaler den nationale kliniske kvalitetsdatabase CPOP Opfølgingsprogram for Cerebral Parese, at måleredskabet GMFM anvendes hvert eller hvert andet år – afhængigt af barnets alder og funktionsniveau.

GMFM og softwareprogrammet, Gross Motor Ability Estimator (GMAE-2), anvendes til at fastsætte barnets grovmotoriske funktionsniveau samt den nærmeste zone for udvikling og kan anvendes til planlægning af en målrettet fysioterapeutisk indsats. GMFM testen giver den enkelte fysioterapeut og det tværfaglige team en god forudsætning for at planlægge og evaluere indsatser for børn med cerebral parese i samarbejde med forældrene.

Efter workshoppen vil deltagerne på baggrund af viden om Gross Motor Function Measure kunne reflektere over din egen brug af standardiserede/validerede måleredskaber til undersøgelse samt planlægning og evaluering af indsatser til børn med cerebral parese. De vil også have indblik i opbygningen af de enkelte opgaver samt være i stand til at genkende situationer, hvor der er risiko for, at beskrivelserne for scoring af testen ikke overholdes.

**Workshop, torsdag 15.15-15.55, lokale 6**

## Ledelse som karrierevej

*Hirse Tikjøb, rekrutteringskonsulent, Mercuri Urval. Hirse har selv været leder i en årrække og inden da arbejdet med organisations- og ledelsesudvikling som konsulent i mange år. I dag arbejder hun med rekruttering.*

*Lisbeth Schrøder, formand for Danske Fysioterapeuters Lederråd, byder velkommen. Lisbeth er ledende overfysioterapeut ved Slagelse, Næstved og Ringsted Sygehuse.*

### Hør en rekrutteringseksperter bud på hvad der skal til – fra første lederjob til toplederjob.

**Vil du gerne** gøre en forskel som leder? Der er behov for dygtige ledere på sundhedsområdet i både den offentlige og private sektor på alle niveauer. Som fysioterapeut har du en særlig sundhedsfaglig indsigt, som du skal forvalte forskelligt afhængigt af, hvilket ledelsesniveau du stræber efter.

Vi stiller spørgsmålene: Hvad kigger arbejdsgiverne efter, når de rekrutterer til lederposter på forskellige niveauer? Hvordan lander du det første lederjob og hvordan bevæger du dig fra et ledelsesniveau til det næste? Hvor meget betyder uddannelsesmæssig baggrund? Hvad skal du være opmærksom på ift. dit CV? Hvilken betydning har netværk? Hvad med LinkedIn? Kan du forberede dig til test? Og hvordan forholder du dig, når der er rekrutteringsfirma på?

Vi har inviteret Hirse Tikjøb fra Mercuri Urval til at give os nogle perspektiver på ledelse som karrierevej i en workshop, der byder på oplæg om, hvordan du kan bringe dig i stilling til de spændende lederjobs. Du får også masser af gode råd med på vejen og kan få svar på dine spørgsmål ift. at gå ledervejen som fysioterapeut.

På fagkongressen kan du også booke en karrieresamtale med Hirse Tikjøb eller ledelseskonsulent Lotte Colberg Olsen fra Danske Fysioterapeuter. Læs mere i det trykte program.

**Workshop, torsdag 16.00-16.45, lokale 6**

## FREDAG 13. APRIL

### Molliidragten – et hjælpemiddel der udfordrer tonus

*Anne Lammert, fysioterapeut  
Peter Kolbye, fysioterapeut  
Carsten Olsson, fysioterapeut*

**Kom og se dragten og hør nærmere om dragtens virkning. Firmaet Bandagist Jan Nielsen præsenterer Molliidragten, og der er god tid til spørgsmål og diskussion.**

**Mollii er en** ny behandlingsform, der giver mulighed for afslapning af spastiske, stive og smertefulde muskler på en sikker og nem måde, og det hjælper flere mennesker med spasticitet og ændret muskelspænding. Mollii anvendes cerebral parese, apoplexia cerebri og rygmærsskade.

Mollii er en specialdesignet elastisk heldragt, der reducerer smerter og øger mobiliteten ved hjælp af elektriske impulser. Dragten er designet i et elastisk materiale, hvor elektroderne er placeret på de store muskelgrupper.

Batteridreven strøm sendes til 58 elektroder på indersiden af tøjet, hvor det er muligt at stimulere 42 forskellige muskler, afhængig af patientens behov.

Mollii er et kropsbærent hjælpemiddel, som indstilles i forhold til de individuelle behov. Mollii afhjælper symptomer som følge af en neurologisk sygdom eller hjerneskade.

Det særlige ved Molliidragten er, at brugeren arbejder sammen med dragten og opnår derved reduktion af de gener, der ledsager spasticiteten.

Mollii bruges i ADL-aktiviteter, strømmen ligger i samme frekvensfelt som vores nervesystem gør, når vi er almindeligt aktive i hverdagen med tøjvask, madlavning og meget mere.

Workshoppen begynder med en præsentation med efterfølgende debat og spørgsmål fra deltagerne.

**Firmaworkshop, fredag 8.00-8.45, Sjælland**

## Studerende på kandidatuddannelser – projekter, ideer, spørgsmål og sparring

*Daniel Broholm, stud. scient i fysioterapi, Syddansk Universitet, m.fl.*

Kom og fortæl om dit specialeprojekt eller hør andre studerende fortælle om deres. Du kan også blive klogere på, hvordan det er at læse på universitetet, hvis du ikke selv er kandidatstuderende.

- Vil du gerne formidle viden fra dit speciale?
- Er du nysgerrig på, hvad andre kandidatstuderende beskæftiger sig med i deres speciale?
- Vil du høre om, hvordan det er at læse på universitetet?

Kandidatstuderende på fagkongressen inviterer til en workshop, hvor alle er velkomne.

Her kan du møde studerende, der fortæller om deres specialeprojekt, du kan blive klogere på, hvad man kan skrive speciale om på en kandidatuddannelse og du kan også høre om, hvordan det er at læse på universitetet.

Workshoppen er åben for alle interesserede på fagkongressen, der har lyst til at komme i kontakt med de kandidatstuderende, høre deres posterpræsentation, give feedback, debattere og i øvrigt bare have mulighed for at stille spørgsmål.

**Workshop, fredag 8.00-8.45, lokale 6**

## How to use blood flow restricted exercise in clinical practice?

*Dr. Jeremy Loenneke, assistant professor of Exercise Science, Department of Health, Exercise Science, and Recreation Management, The University of Mississippi, USA*  
*Esben Kjeldgaard Jensen, PT, MSc, At Work A/S, Frederiksberg, and FysioDanmark, Hillerød, Denmark*  
*Jakob Fisker, PT, Section for Orthopaedic & Sports Rehabilitation, Health Centre Nørrebro, Copenhagen*  
*Christina Ramos Stavngaard, PT, Academic advisor, Section for Orthopaedic & Sports Rehabilitation, Health Centre Nørrebro, Copenhagen*

**This workshop is an extension of the symposium 'Blood flow restricted exercise after surgery or disease: Adaptations, clinical efficacy and safety'. This new and promising training modality will be demonstrated and practiced.**

Blood flow restricted exercise has shown to increase muscle hypertrophy or strength early after surgery or disease. This training modality involves the application of a wrapping device such as an inflated tourniquet/cuff or a special designed strap to restrict the arterial inflow and venous outflow to muscles during exercise. This means, that the patient can perform strength training with much fewer loads than normal strength training. A wide range of patient groups with weight bearing restrictions or articular joint pain may benefit from blood flow restricted exercise.

- **Demonstration: How to apply blood flow restriction exercise**  
 During his short demonstration, Jeremy Loenneke will cover important aspects such as the size of the cuff/elastic band, the pressure of the cuff/elastic band and safety aspects.
- **Workshops: How to use blood flow restricted exercise in clinical practice**  
 Blood flow restricted exercise will be performed in small groups, where the participants can experience the training modality at first hand. Any questions can be discussed in small groups. The workshop holders have many years of experience with blood flow restricted exercise, Esben Kjeldgaard Jensen, Jakob Fisker, Christina Ramos Stavngaard.

**Workshop, fredag 9.55-10.35, Jylland**

## CPAP-behandling på hospital – praktisk anvendelse

*Barbara C. Brocki, fysioterapeut, ph.d., Aalborg  
Universitetshospital*

*Linette M. Kofod, specialeansvarlig fysioterapeut, MR,  
Hvidovre Universitetshospital*

Få viden om evidens, effekt, anvendelsesindikation og praktisk brug af CPAP. Hvem er målgruppen? Hvilke parametre kan vi anvende til at vurdere effekt af CPAP? Hvad bør fysioterapeuten være opmærksom på for at kvalitetssikre og derved opnå den bedste effekt af behandlingen?

**CPAP står for** Continuous Positive Airway Pressure og er en behandlingsmetode, som sikrer et vedvarende og ensartet positivt tryk i luftvejene under hele respirationscyklus. CPAP har bl.a. til formål at bedre iltningsniveau i blodet, lette sekretopbringning og øge lungevolumen/FRC.

CPAP anvendes i stigende grad på de fleste danske hospitaler. Der er vidt forskellig praksis med hensyn til indikation, hyppighed, dosis og ressourceforbrug, og desuden findes der forskellige typer CPAP-udstyr med forskellige egenskaber. Det er vigtigt, at fysioterapeuter er bekendt med de nødvendige apparatkrav for at opnå den forventede effekt af behandlingen.

Deltagerne præsenteres for:

- Gennemgang af evidens for effekt af CPAP ved især thorax- og abdominalkirurgiske samt medicinske specialer, med fokus på dosis-respons.
- Praktisk gennemgang og afprøvning af forskellige typer udstyr. Der diskuteres krav til CPAP-udstyr samt hvordan effekten af CPAP kan optimeres.
- Diskussion om daglig praksis med baggrund i en patient-case.

**Workshop, fredag 10.40-11.25, Fyn**

## Kunsten at sætte ægte mål i hverdagsrehabilitering

*Irma Edqvist, fysioterapeut, Skanderborg Kommune*

Hvordan arbejder man systematisk med at identificere borgerens individuelle behov? Få introduktion til konkrete målsætningsredskaber – TARGET og måltrappen, og deltag i diskussionen af fysioterapeutens rolle i at skræddersy målet med interventionen.

**Målsætning er et** centralt element i (hverdags)rehabiliteringsprocessen, da det bidrager til at øge borgerens motivation og fremmer et målrettet forløb. Målsætning anses som en kernefærdighed blandt praktikere, men det er ikke altid så nemt at sætte mål, og det kan udfordre fysioterapeuten og dennes tværfaglige samarbejdspartnere.

At arbejde systematisk med målsætning viser resultater i form af øget helbredsbeholdning, øget sandsynlighed for at blive i eget hjem, bedre målopfyldelse, mindre afhængighed af personlig hjælp til pleje, reduceret risiko for indlæggelser og/eller kortere varighed af hjemmeplejeinterventionen.

Workshoppen bliver en blanding af oplæg og dialog. Deltagerne arbejder i små grupper undervejs og arbejder med et afsnit af målsætningsredskabet TARGET. Deltagerne får konkrete forslag til, hvordan de kan arbejde videre med målsætning i egen praksis.

Fokus udspringer af den kliniske retningslinje "Systematisk anvendt målsætning i rehabilitering til borgere over 65 år med behov for hjælp til personlig pleje og/eller praktisk hjælp i hverdagen" fra 2013.

**Workshop, fredag 14.45-15.25, lokale 7-8**

## Fysioterapeutisk samtale om seksuel sundhed

*Kristina Areskoug Josefsson, fysioterapeut, ph.d., afdelingschef på Jönköping Academy for Improvement of Health and Welfare, Jönköping Universitet, Sverige.*  
*Helle Gerbild, fysioterapeut, master i sexologi, ph.d.-studerende, Forskningsenheden for Almen Praksis, SDU.*

Fysioterapeuters italesættelse af seksuel sundhed er i fokus samt intervention rettet mod at rehabilitere patienters seksuelle sundhed og inddragelse af denne som en del af professionsudøvelsen. Der tages udgangspunkt i patienternes seksuelle sundhedsrettigheder, diagnosespecifik forskning og anvendelse af PLISSIT-modellen som samtaleredskab for kommunikation med patienten.

**Præsentation af aktuel** forskningsbaseret viden om felterne: 'Kommunikation om seksuel sundhed i fysioterapi' samt 'Den seksuelle sundheds betydning for den generelle sundhed'. PLISSIT-modellen præsenteres som metode til at samtale med patienterne om seksuel sundhed, og modellen anvendes til praktisk afprøvning og øvelse i at tale om seksualitet og inddrage seksuel sundhed i fysioterapeutiske kliniske interventioner.

Der tages udgangspunkt i deltagernes eget kliniske praksisområde, og igennem følgende program over deltagerne sig i samtale ud fra PLISSIT-modellen.

- Hvad er seksuel sundhed?
- Præsentation af PLISSIT-modellen
- Hvordan påvirker sygdom seksualiteten?
- Hvordan kan jeg som fysioterapeut samtale med patienter om seksuelle sundhed?
- Hvilke interventioner kan jeg tilbyde patienter?

Kristina Areskoug Josefsson har fysioterapeutisk erfaring og speciale inden for reumatologisk fysioterapi og seksuel sundhedsrehabilitering, og forsker i fysioterapeuters holdning til at fremme seksuel sundhed og kommunikere om seksuel sundhed.

Helle Gerbild har fysioterapeutisk erfaring med behandling af mænd og kvinder med seksuelle dysfunktioner som følge af kræft og kræftbehandling, og har forsket i fysioterapeutstuderendes holdning til at inddrage samtale om seksuel sundhed i deres fremtidige professionsudøvelse.

**Workshop, fredag 14.45-15.25, lokale 9-10**

## Digitalt understøttet genoptræning (DUG) – hvor er vi og hvor skal vi hen?

*Lars Damkjær, fysioterapeut og chefkonsulent, afdeling for Rehabilitering, Københavns Kommune*  
*Peter Rousing Oberländer, fysioterapeut og implementeringskonsulent, afdeling for Rehabilitering, Københavns Kommune*

Ud fra workshopdeltagernes erfaringer og Københavns Kommunes borgeroplevede og terapeutoplevede erfaringer med DUG, skal vi prøve at komme et skridt nærmere fysioterapeuternes ønsker til fremtidens DUG.

**Efter flere år** med test og afprøvninger, med OPI projekter og VTV vurderinger, har Københavns Kommune nu i to år haft DUG som en "skal-ydelse" til flere målgrupper. På baggrund af de erfaringer og med inddragelse af deltagerne kommer vi rundt om følgende:

- Implementering: Vi præsenterer vores model for understøttelse og implementering, og derefter lægges op til debat om, hvordan DUG bliver en naturlig del af den fysioterapeutiske opgavevaretagelse.
- Målgrupper: Vi præsenterer data for vores målgrupper og lægger op til deling af deltagernes erfaringer. Derefter følger debat om, hvad vi kræver som vidensgrundlag inden vi skalerer DUG til nye målgrupper.
- Borgerne: Vi oplever at borgerne er tilfredse, at de bliver motiverede til træning, men der er også andet på spil for borgerne: Hvem er autoriteten? Maskinen? Med udgangspunkt i et kvalitativt studie gennemført i Københavns Kommune kommer vi lidt dybere ned i borgernes oplevelser end tilfredshed.
- Teknologien: Vi bliver tilbudt de samme teknologier som for fem år siden. Er det en myte, at det går stærkt med den teknologiske udvikling? Skal vi fortsat prøve at finde anvendelse for det vi bliver tilbudt eller er der en anden vej, hvor vi kan udvikle den teknologi som vi har brug for. Og hvordan skal den fungere?

**Workshop, fredag 15.30-16.15, lokale 7-8**



---

## LØRDAG 14. APRIL

### Rehabilitering gennem leg, robotter, sensorer og apps

*Per Kjær, lektor, Center for Sundhed i Muskler og Led, Syddansk Universitet*

*Henrik Hautop Lund, professor, Danmarks Tekniske Universitet, København*

*Jacob Nielsen, lektor, Mærsk Mc-Kinney Møller Institutet, Syddansk Universitet*

*Anders Steengaard Sørensen, lektor, Mærsk Mc-Kinney Møller Institutet, Syddansk Universitet*

*Charlotte D. N. Rasmussen, seniorforsker, Det Nationale Forskningscenter for Arbejdsmiljø, København*

*Bue Bonnerup Hesby, ph.d. stud., Center for Sundhed i Muskler og Led, Syddansk Universitet*

*Hanne Rasmussen, forskningsassistent, Rygklinikken, Slagelse Sygehus*

*Loise Sandal, adjunkt, Center for Sundhed i Muskler og Led, Syddansk Universitet*

---

**Hvordan kan det legende element inddrages i træning og rehabilitering af ældre? På hvilke måder kan robotter indgå i træningen efter stroke og andre muskuloskeletale problemstillinger? Er smartphone apps fremtiden i rehabilitering af personer med nakke- og rygproblemer?**

**Patient@home er Danmarks** hidtil største velfærdsteknologiske satsning. Indenfor rehabiliterende træning har vi fokus på træning af ældre, genoptræning efter stroke, måling af bevægelser i nakken samt håndtering af smerter ved akut opstået diskusprolaps i nakken. På workshoppen præsenteres den forskning og de erfaringer oplægsholderne har gjort sig - i et klinisk praktisk perspektiv.

Arbejdet i både patient@home og EU projektet SelfBACK foregår i et nært samarbejde mellem forskere fra discipliner som fysioterapi, kiropraktik, idræt, arbejdsmedicin, fysiologi, ingeniørvidenskab og private virksomheder. Produktudviklingen tager udgangspunkt i analyse af borgerens behov, den videnskabelige evidens og markedets muligheder. Yderligere tager vi så vidt muligt alle interessenter med i processen frem til udvikling af prototyper og modeller for videre afprøvning og implementering.

Workshoppen består af en kort introduktion og fire oplæg á 10 minutter efterfulgt af praktisk demonstration og afprøvning i mindre grupper.

Henrik Hautop Lund fortæller om træningsfliserne Moto Tiles til træning af ældre gennem leg og kommer ind på de overraskende resultater af forskning og udviklingsarbejde på området, herunder det nye begreb gamification. Henrik

vil sammen med en assistent efterfølgende demonstrere den praktiske brug af Moto Tiles.

Jacob Nielsen gennemgår resultaterne af en litteraturgennemgang på robottræning til patienter med følger efter stroke samt udvikling af både avancerede og simple robotter, herunder robotters unikke muligheder for at kompensere for tyngdekraften og yde individuelt tilpasset modstand. Efterfølgende er der mulighed for at afprøve robotterne i praksis og snakke med forskerne.

På baggrund af en systematisk litteraturgennemgang af elektroniske måleredskaber for nakken, gennemgår Bue Bonnerup Hesby forskelle i holdning og bevægelsesmønstre i nakken hos personer med og uden nakkesmerter samt resultaterne af sit udviklingsarbejde og forskning på området. Efterfølgende demonstrerer Bue test og sensorer til måling af bevægelser og bevægelses kvalitet i nakken.

Charlotte Rasmussen gennemgår det forskningsmæssige og teoretiske grundlag for SelfBACK-appen. Appen er interaktiv og formidler individuelt tilpasset evidensbaseret information, øvelser og opfordring til fysisk aktivitet. Efterfølgende demonstrerer Charlotte appen og dens komponenter sammen med Loise Sandal. Hanne Rasmussen gennemgår prototypen, Reapp, som er udviklet i patient@home.

**Workshop, lørdag 9.55-11.25, Jylland**

## How to address Achilles tendinopathy when the usual first line treatment fails?

*Lorenzo Masci, Consultant in Sports and Exercise Medicine, Pure sports medicine and ISEH, London, United Kingdom*  
*Rikke Beyer, PT, PhD student, Institute of Sports Medicine, Hospital and faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark*

Evidence on eccentric versus heavy slow resistance exercises for Achilles tendinopathy. Individual exercise program and pain monitoring to improve compliance and outcome. Differential diagnostics in Achilles tendinopathy. What other treatment modalities can we use, when the exercise treatment fails?

**Achilles tendinopathy often** has a complicated history of pain, repeated attempts of treatment and exercise and re-occurrence of pain, when returning to sports. The ability of the patients to be consistent and motivated in the rehabilitation varies highly and often they either give up the training or continues with the same load and end up with a chronic condition.

This workshop will guide you through the process of choosing the optimal exercise program for Achilles tendinopathy and what other treatments to consider if exercises fails.

The workshop consists of theory and practical examples of exercise programs and ultrasound diagnostics of the Achilles tendon:

- Rikke Beyer: The evidence behind the eccentric versus heavy slow resistance exercises – where do we stand? How can we design individual rehabilitation programs combined with activity control, exercise and pain monitoring?
- Lorenzo Masci: Differential diagnostics in Achilles tendinopathy  
What options are there for diagnostics and other treatment modalities if exercise fails? Including “the role of plantaris tendon in Achilles tendinopathy”.

Workshop organized by The Danish Association of Sports Physiotherapy.

**Workshop, lørdag 9.55-10.35, lokale 24**

## Tips and pitfalls in diagnostic ultrasound imaging of the rotator cuff tendons – when is it pathological?

*Stuart Wildman, physiotherapist and MSK Sonographer, Founder of The Ultrasound Site, Homerton University Hospital Foundation Trust and The Royal Surrey County Hospital, United Kingdom*

The workshop will guide you through the possible pathological findings in the rotator cuff tendons as well as give you an understanding of how the different findings should be interpreted.

**We will focus** on:

- Evidence on the accuracy of ultrasound in diagnostics of the rotator cuff tendons.
- A systematic approach to how ultrasound can support the clinical examination of the rotator cuff tendons – tips and pitfalls.
- When is it considered a partial thickness or a full thickness rotator cuff tear?
- Which sonographic signs suggest a rotator cuff tear is acute or degenerative?

Rotator cuff tear is a common cause of pain and disability among adults. The prevalence of rotator cuff tears correlates with age, and is classified as either partial-thickness tear or full-thickness tear. It can occur either traumatic or non-traumatic.

Several studies have concluded, that when considering accuracy, cost and safety, ultrasound is the best option, when a rotator cuff tear is suspected. It is a user-dependent modality and health professionals must be skilled based on adequate training. It is crucial to know the sonographic signs and to be able to differentiate between different pathological findings to ensure, that the patient will receive the right kind of treatment.

The workshop consists of theory and practical examples of ultrasound examinations of the rotator cuff tendons. Furthermore, there will be practical session, where the participants will have the opportunity to practice the relevant projections.

Workshop organized by The Danish Association of Sports Physiotherapy

**Workshop, lørdag 10.40-11.25, lokale 24**

## Fra idé til handling – fra fysioterapeut til iværksætter

*Per Gade, fysioterapeut, kliniker, Arkadens Fysioterapi Erhverv, Aalborg*  
*Birgitte Vangsgaard, praktiserende fysioterapeut, Hunderupvejens Fysioterapi. Iværksætter, Human Walking*  
*Jacob Nees, kliniker, Golfklinik, Silkeborg*  
*Jesper Aggergaard, kliniker, AscendFys, København*

### Mød fire fysioterapeuter med fire nye koncepter!

**Vi præsenterer fire** innovative fysioterapeuter, som har gjort deres idé til virkelighed.

Kom og hør, hvordan deres rejse har været fra den første tanke til udvikling af idéen. Og hvordan processen har været for at nå frem til det stadie, hvor deres idé er i dag.

Hvilke udfordringer har de mødt, og hvor har de fået hjælp og sparring? Hvad er deres holdninger til innovationsklimaet i fysioterapibranchen?

Deltagerne møder:

- Per Gade: Prima-Care
- Birgitte Vangsgaard: En opfindelse til gangbesværede - en moderne rollator
- Jacob Nees: Golfklinikker
- Jesper Aggergaard: Fysioterapi og Virtuel reality til genoptræning

Der er en kort introduktion og fire oplæg á 15 minutter efterfulgt af plenumdiskussion om innovation i praksissektoren og en afsluttende opsamling.

**Workshop, lørdag 9.55-11.25, lokale 7-8**

## Patienten med erhvervet hjerneskade – undersøgelse og behandling af tonusproblemer

*Susanne Baagøe, fysioterapeut, Klinik for Højt Specialiseret Neurorehabilitering/Traumatisk Hjerneskade*  
*Pi Gravesen, fysioterapeut, Klinik for Højt Specialiseret Neurorehabilitering/Traumatisk Hjerneskade*

Få kendskab til analysen af tonusproblematikken hos patienter med erhvervet hjerneskade samt til de fysioterapeutiske og medicinske behandlingsmuligheder af tonusproblematikker som kan følge hjerneskaden. Få forståelse for vigtigheden af en tværfaglig indsats i forhold til håndtering og behandling af tonusproblematikker hos patientgruppen.

**Fokus er på** fysioterapeutens forståelse og kendskab til analyse, vurdering og behandling af tonusproblematikker hos patienter med erhvervet hjerneskade. Der gives en kort beskrivelse af håndteringen af og arbejdet med tonusproblematikker på Klinik for Højt Specialiseret Rehabilitering/Traumatisk Hjerneskade.

Med udgangspunkt i videoer med patientcases kan deltagerne byde ind med analyse og forslag til undersøgelse og behandling. Både den fysioterapeutiske og medicinske behandling af tonusproblematikken samt vigtigheden af den tværfaglige indsats vil indgå i diskussionen.

Centrale spørgsmål:

- Er øget tonus kun negativt?
- Hvordan forebygges og behandles kontrakturer?
- Hvordan bliver fysioterapeuten en del af beslutningsprocessen omkring den medicinske behandling?
- Hvordan times behandlingen optimalt?

**Workshop, lørdag 9.55-10.35, lokale 9-10**

DEBATTER

—



## TORS DAG 12. APRIL

### Arbejde til 70 – hvordan kan vi holde til det?

*Kirsten Ægidius, medlem af Danske Fysioterapeuters hovedbestyrelse og TR-råd, Skejby Sygehus*  
*Agnes Holst, medlem af Danske Fysioterapeuters hovedbestyrelse og arbejdsmiljøråd, Tranbjerg Fysioterapi*  
*Lisbeth Schrøder, medlem af Danske Fysioterapeuters hovedbestyrelse og lederråd, Slagelse, Ringsted og Næstved Sygehuse*  
*Brian Errebo-Jensen, regionsformand, medlem af Danske Fysioterapeuters hovedbestyrelse og arbejdsmiljøråd*

Hvad skal der til for, at vi går glade på arbejde, til vi bliver 70? Og kan holde til det.

**Pensionsalderen stiger, og** det samme gør det antal år, vi skal arbejde. Fysioterapeuterne skal holde danskerne i bevægelse, til vi bliver 70 år eller ældre. I en sundhedssektor under hastig forandring, hvor vi både skal løbe stærkere og sætte os ind i ny udvikling i fag, teknologi og organisering, kræver det god energi og fysik, stærk psyke og høj stress-tærskel. Samtidig forventer vi meget af os selv, fordi vi gerne vil levere det bedste.

Det stiller krav til det psykiske arbejdsmiljø på fysioterapeuternes arbejdspladser. Hvordan indretter vi os, så medarbejdere og ledere bevarer arbejdsglæden? Hvordan holder vi til at arbejde i mange år, samtidig med at vi har overskud til at leve et godt liv og være noget for andre udenfor arbejds-livet? Og hvilken forskel kan TRIO'en, med leder, tillids- og arbejdsmiljørepræsentant, gøre for arbejdet med det psykiske arbejdsmiljø?

Fysioterapeuterne har i den seneste FTF-undersøgelse givet deres bud på, hvordan det står til med det psykiske arbejdsmiljø på arbejdspladserne. Vi har taget et kig i resultaterne for at finde ud af, hvad der lykkes, og hvor skoen trykker. Nu kan du deltage i debatten. Vær med, så vi sammen kan finde svar på: Hvad skal der til for, at vi går glade på arbejde, til vi bliver 70? Og kan holde til det.

Værterne vil efter et kort oplæg invitere til debat.

**Debat, torsdag 11.45-12.45, Jylland**

## FREDAG 13. APRIL

### Børnefysioterapi: Hvordan øger vi anvendelsen af standardiserede målemetoder?

*Derek Curtis, fysioterapeut, PhD, Dansk Selskab for Pædiatrisk Fysioterapi*  
*Michelle Stahlhut, PhD-studerende, specialist i pædiatrisk fysioterapi*

Diskussion af de faglige og fagpolitiske muligheder for at fjerne barriererne og øge anvendelse af standardiserede målemetoder blandt børnefysioterapeuter i Danmark.

**En spørgeskemaundersøgelse omkring** danske børnefysioterapeuters anvendelse af test- og målemetoder viste en meget varieret anvendelse af standardiserede målemetoder.

En forandring i situationen vil kræve, ifølge studiet, et øget fagpolitisk fokus på området målemetoder, øgede ressourcer til efter- og videreuddannelse inden for pædiatriske målemetoder, et øget fokus på arbejdspladsen om værdien og prioriteringen af at effektmåle, og videreudvikling af standardiserede måleredskaber til børn med svære fysiske, psykiske og kognitive funktionsnedsættelser.

I debatten drøftes de faglige og fagpolitiske muligheder for at fjerne barriererne og øge anvendelse af standardiserede målemetoder blandt børnefysioterapeuter i Danmark til glæde for børnene, terapeuterne og faget med udgangspunkt i følgende fokuserede spørgsmål:

1. Hvad er den bedste måde at lære og implementere en ny målemetode på en arbejdsplads? Hvilken hjælp har du brug for?
2. Hvordan kommer du videre, hvis du ikke kender til en relevant målemetode til en gruppe børn, som du arbejder med?
3. Hvordan kan vi sikre, at vores ledelse har større fokus på og forståelse for målemetoder?
4. Hvordan kan Danske Fysioterapeuter hjælpe vores speciale med at arbejde videre med emnet standardiserede målemetoder?

Debatten bliver indledt af et kort oplæg fra adjunkt og ph.d. Derek Curtis omkring studiet, og debatten modereres af Michelle Stahlhut, som er specialist i pædiatrisk fysioterapi og ph.d.-studerende.

Debatten er arrangeret af Dansk Selskab for Pædiatrisk Fysioterapi.

**Debat, fredag 8.00-8.45, Fyn**

## Dansk Selskab for Fysioterapi – specialisering, standardisering eller individualisering?

*Lars Henrik Larsen, formand for DSF*  
*Carsten Bogh Juhl, lektor, PhD, uddannelsesleder*  
*for kandidatuddannelsen i fysioterapi på SDU*  
*Jeanette Præstegaard, PhD, docent på professionshøjskolen*  
*Absalon*

### Dansk Selskab for Fysioterapi inviterer til morgenmøde på fagkongressen

**Dansk Selskab for Fysioterapi** har 17 faglige selskaber, som gennem mange medlemmers engagement er repræsenteret samlet med en stor stand på fagkongressen. Omdrejningspunktet for DSF er at understøtte, udvikle og kvalitetssikre fagligheden i dansk fysioterapi gennem de faglige selskaber.

På dette morgenmøde løftes blikket fremad mod år 2030 med specielt fokus på faglige udviklingsstrategier. Vi har inviteret Carsten Bogh Juhl og Jeanette Præstegaard, der sammen med repræsentanter fra DSF's specialiseringsråd vil give deres kompetente input i en diskussion om fremtidens fysioterapi. Alle deltagere på fagkongressen inviteres til at deltage og udfordre panelets debat med fokus på prioriteringer, muligheder og udfordringer i den nærmeste fremtid i relation til fysioterapeutisk faglig udvikling, forskning, uddannelse og specialisering.

Panelet debatterer kerneområder i faglig udvikling med afsæt i et kort oplæg fra DSF's bestyrelse om faglige udviklingsstrategier. I debatten stilles en række spørgsmål som:

- Hvordan styrkes de faglige miljøer frem mod 2030?
- Hvad er de største udfordringer for at løfte kvaliteten i klinisk praksis i dansk fysioterapi i de kommende årtier?
- Hvilke faktorer bidrager til den enkelte fysioterapeuts kompetenceudvikling? Hvilken rolle spiller specialisering, standardisering og individualisering?
- Hvordan styrkes fagligheden af forsknings-, uddannelses- og kvalitetssikringsindsatser? Og hvordan skal disse prioriteres?

Er du interesseret i faglig udvikling? Kom og deltag i debatten!

Debatten er arrangeret af Dansk Selskab for Fysioterapi.

**Debat, fredag 8.00-8.45, Jylland**

## Fysioterapeuter i akutfunktioner – hvordan ser en national kompetenceprofil ud?

*Mette Frank Fenger, fysioterapeut, Aarhus*  
*Universitetshospital*  
*Rasmus Gormsen Hansen, overfysioterapeut på Ringsted*  
*og Slagelse Sygehus*

### Hvad kan fysioterapeuter bidrage med i akutmodtagelsen? Dette og to andre spørgsmål vil være udgangspunkt for debatten om fysioterapi i akutfunktioner.

- Hvad kan fysioterapeuter bidrage med i akutmodtagelsen?
- Hvilke kompetencer er der behov for, at fysioterapeuter besidder for at kunne arbejde i akutfunktioner?
- Hvordan kan vi sammen opnå at få flere fysioterapeuter ind på de akutte sengeafsnit og i skadestuen?

Et netværk af fysioterapeuter med stor interesse for det fysioterapeutiske arbejde i akutmodtagelserne byder alle interesserede velkommen til en debat om fysioterapi i akutfunktioner med udgangspunkt i ovenstående tre spørgsmål. Debatten bliver indledt af tre korte oplæg:

1. Præsentation af kompetenceprofil for ergoterapeuter og fysioterapeuter der arbejder indenfor det akutte område i Region Midtjylland v. Mette Frank Fenger.
2. Det daglige arbejde i skadestuen på Slagelse Sygehus, hvor fysioterapeuter selvstændigt diagnosticerer og udreder patienter v. Rasmus Gormsen Hansen.
3. Kort film om det nye speciale i Akutmedicin. Sådan definerer akutlægen selv deres funktion.

I forbindelse med de store forandringer i den offentlige sundhedssektor tilbage i 2007, blev den akutte indsats styrket, og akutmodtagelserne blev oprettet. 10 år senere har Sundhedsstyrelsen godkendt et nyt lægespeciale i Akutmedicin og en sygeplejespecialisering som behandlersygeplejerske til skadestuen.

Fysioterapeuterne er langsomt rykket ind på akutmodtagelserne, herunder også i skadestuerne. Behovet og potentialet for flere fysioterapeuter i de akutte funktioner er imidlertid stort. En national kompetenceprofil for fysioterapeuter i akutfunktioner skal afgrænse den fysioterapeutiske indsats og vægte tungt i argumentationen for at få flere fysioterapeuter i akutmodtagelsen.

Vi ved, at fysioterapeuter har en stor viden på bl.a. det ortopædkirurgiske område, og at erfarne fysioterapeuter kan varetage førstekontakten ved en lang række patienter i skadestuen. Det er desuden vigtigt, at patienternes funktionsevne bliver vurderet af en fysioterapeut tidligt i indlæggelsesforløbet, så den bedste sammenhængende behandling over sektorer kan igangsættes, når patienterne "vendes i døren".

**Debat, fredag 8.00-8.45, lokale 9-10**

## Motivationsarbejdet – hvor meget må fysioterapeuten bestemme?

*Dorthe Birkmose, cand.psych., forfatter og foredragsholder*

### Danske Fysioterapeuters Etiske Råd inviterer til refleksion og diskussion af arbejdet med motivation – med oplæg fra psykolog Dorthe Birkmose.

Når man arbejder med andres motivation, så befinder man sig i et etisk minefelt.

Der er en konstant risiko for, at man kommer til at overskride menneskets grænser for, hvad man må blande sig i og mene noget om. Fysioterapeutens evige refleksion bag enhver anbefaling, rådgivning og behandling kredser om afvejningen af, hvor styrende man må være.

Svarene findes i praksis på et kontinuum, hvor det ikke-dirigerende motivationsarbejde ligger midt mellem det styrende og laissez faire.

Mennesket er ikke særlig konsekvensberegrende, men det er fysioterapeuten nødt til at være. Når man indimellem vurderer, at man ved bedst og derfor har pligt til at styre og bestemme over et andet menneske, så kræver det en konsekvensberegning.

Spørgsmålet er: Hvad lærer dette menneske af at blive styret og bestemt over (og måske endda føler sig tvunget eller manipuleret) af fysioterapeuten? Når man bestemmer over et andet menneske, så risikerer man nemlig at skabe enten modstand eller indlært hjælpeløshed.

Sessionen vil kredse om refleksionsspørgsmålet "Hvor meget må vi bestemme?"

Fokus vil være på en beskrivelse af modstand og indlært hjælpeløshed som de vigtigste teoretiske begreber for det praktiske motivationsarbejde.

Dorthe Birkmose har skrevet etik-bogen "Når gode mennesker handler ondt".

**Debat, fredag 15.30-16.15, 9-10**

# KORTE FOREDRAG

—



## TORS DAG 12. APRIL

### Patterns of multi-morbidity in older medical patients and how they relate to mobility the first year after an acute admission

*Helle Juul-Larsen (1,2,3), T Bandholm (1,2,3), O Andersen (1,2), J Petersen (1,4)*

1) Clinical Research Center (Section 056), Hvidovre Hospital, University of Copenhagen, Hvidovre, Denmark

2) Department of Clinical Medicine, University of Copenhagen, Copenhagen, Denmark

3) Physical Medicine & Rehabilitation Research-Copenhagen (PMR-C); Department of Physical and Occupational Therapy, Copenhagen University Hospital, Hvidovre, Denmark

4) Section of Biostatistics, University of Copenhagen, Copenhagen, Denmark

**Background:** Multimorbidity, the presence of more than one chronic condition in a single individual, is common among older people and may contribute to adverse health outcomes, such as increased disability and functional decline. Being able to identify if different patterns of multimorbidity and how they relate to mobility could potentially help stratify patients for treatment and research.

**Aim:** To describe older medical patients' mobility in relation to patterns of multimorbidity one year after acute medical hospitalization.

**Methods:** Prospective cohort study of patients ( $\leq 65$  years) admitted to the emergency department for acute medical illness. During the first 24 hours, at 30 days and at one year after discharge, we assessed mobility level using the de Morton Mobility Index (DEMMI). Secondary outcomes (Handgrip strength; Walking speed; and Barthel20) were obtained one year after discharge. Information about chronic conditions was collected by national registers. We used Latent Variable Models to determine differences among patterns of multimorbidity.

**Preliminary Results:** A total of 369 patients (77.9 years, 62% women) were included, 324 patients participated in the 30 day follow-up and 253 patients (77.8 years, 64% women) in the one-year follow-up. In total, 50 patients died between 30 days and one year after discharge. Overall, 19 patients declined to participate in the one-year follow-up. These 19 patients did not differ from the participants ( $n=253$ ) regarding age (76.9 vs. 77.8,  $p=0.68$ ), sex (women: 63.2% vs. 63.6%,  $p=0.97$ ) and DEMMI at the 30 day follow-up visit (median: 62 vs. 67,  $p=0.1$ ). Patients ( $n=253$ ) had a median number of chronic conditions of 3 (Inter quartile range (IQR)=1;6). Within the last year, 38% had experienced a

fall. One year after discharge, patients had a median DEMMI-score at 67 (IQR=48;74), a median handgrip strength of 21.5 kg (IQR=16.0;27.6), a median walking speed of 0.72 m/sec (IQR=0.54;0.89), and a median Barthel20-score of 19 (IQR=18;20).

**Preliminary Conclusion:** Although 50% of the patients tested one year after acute medical hospitalization had high mobility, 25% had mobility limitations. Further analyses will determine the differences between patterns of multimorbidity.

**Kort foredrag, torsdag 11.45-12.00, Fyn**

### Interrater reliability of Volume-Viscosity Swallowing Test; screening for dysphagia among hospitalized elderly medical patients

*Lise Walther Jørgensen (1), K Søndergaard (2), D Melgaard (3), S Warming (4)*

1) Centre of Care and Rehabilitation, Copenhagen, Denmark

2) Gentofte Hospital, Gentofte, Denmark

3) North Denmark Hospital, Hjørring, Denmark

4) Bispebjerg and Frederiksberg Hospitals, Copenhagen, Denmark

**Background:** Oropharyngeal dysphagia (OD) is prevalent among medical and geriatric patients admitted due to acute illness and it is associated with malnutrition, increased length of stay and increased mortality. A valid and reliable bedside screening test for patients at risk of OD is essential in order to detect patients in need of further assessment. The Volume-Viscosity Swallow Test (V-VST) has been shown to be a valid screening test for OD in mixed outpatient populations. However, as reliability of the test has yet to be investigated in a population of medical and geriatric patients admitted due to acute illness, we aimed to determine the interrater reliability of the V-VST in this clinical setting.

**Methods:** In three Danish hospitals (CRD-BFH, CRD-GH, NDR-H) 11 skilled occupational therapists examined an unselected group of 110 patients admitted to geriatric or medical wards. In an overall agreement phase raters reached  $\geq 80\%$  agreement before data collection phase was commenced. The V-VST was applied to patients twice within maximum one hour by raters who administered the test in an order based on randomization, blinded to each other's re-

sults. Agreement, Kappa values, weighed Kappa values and Kappa adjusted for bias and prevalence are reported.

**Results:** The interrater reliability of V-VST as screening test for OD in patients admitted to geriatric or medical wards was substantial with an overall Kappa value of 0.77 (95 % CI 0.65-0.89) however interrater reliability varied among hospitals ranging from 0.37 (95% CI -0.01-0.41) to 0.85 (95% CI 0.75-1.00). Interrater reliability of the accompanying recommendations of volume and viscosity was moderate with a weighted kappa value of 0.55 (95 % CI 0.37-0.73) for viscosity and 0.53 (95 % CI 0.36-0.7) for volume. The overall prevalence of OD was 34.5 %, ranging from 8 % to 53.6 % across hospitals. The prevalence and bias adjusted Kappa value (PABAK) was 0.76 (range 0.6 – 0.85).

**Conclusions:** The V-VST seems to be a moderately reliable screening tool for detecting OD among medical and geriatric patients. However, the recommendations of volume and viscosity add limited clinical value to the test.

**Kort foredrag, torsdag 12.00-12.15, Fyn**

## The Cumulated Ambulation Score is superior to the NMS and the DEMMI in predicting discharge destination of geriatric patients

*Maria Aagesen (1), A Vinther (1), MT Kristensen (2)*

1) Afdeling for Ergoterapi og Fysioterapi, Herlev-Gentofte Hospital, Herlev, Danmark

2) Fysio- og Ergoterapeutisk Afdeling, Hvidovre Hospital, Hvidovre, Danmark

**Purpose:** To be able to return to prior living conditions is a key goal of the multidisciplinary geriatric treatment. The length of stay for a geriatric patient is short and it is necessary to use easily applicable measurement tools to accurately predict discharge destination. The aim of the study was to compare the ability of New Mobility Score (NMS), the De Morton Mobility Index (DEMMI) and the Cumulated Ambulation Score (CAS) to predict discharge destination in hospitalized geriatric patients.

**Methods:** An observational 1-year cohort study including geriatric patients admitted consecutively from their own home during 2014 were studied. The pre-hospital NMS was recorded, while DEMMI and CAS were evaluated upon admission and at discharge. Demographical data, cause of ad-

mission, need of further rehabilitation and discharge destination were registered.

**Results:** 491 patients (35% men) with a mean age of 85 (SD 6) were included in the analysis. Upon admission 99% of the patients were assessed with NMS, 82% were evaluated objectively with DEMMI and 99% with CAS. 153 patients were not discharged to their home. A simple logistic regression showed that odds for not being discharged to home was 8 times higher for patients with a non-independent mobility level (CAS  $\leq$  5) upon admission (OR=8.02, 95%CI 5.10-12.60) compared to those with a CAS = 6, and better than a DEMMI  $\leq$  48 (4.46, 2.73-7.29) and a NMS  $\leq$  5 (2.9, 1.98-4.45). The predictive values were only minimally affected when adjusted for gender; age and cause of admission in multivariable analysis.

**Conclusion:** Completion rate was high for the easily applicable CAS and it seems superior to the DEMMI and the NMS in predicting discharge destination in geriatric patients. We suggest that further discussions of which outcome measures be used in geriatric settings are instigated.

**Kort foredrag, torsdag 12.15-12.30, Fyn**

## DEMMI og RSS test til stratificering af ældre borgere i almen genoptræning i Hvidovre Kommune

*Pia Maria Ilvig (1), JE Lerkær (1), PD Enevoldsen (1), NH Nielsen (1), HM Djurhuus (1), C Bodilsen (2), G Søbye (1), L Kronborg (1,3)*

1) Genoptræningen Hvidovre Kommune, Hvidovre, Danmark

2) Træning og Sundhed, Roskilde Kommune, Roskilde, Danmark

3) Klinisk Forsknings Center, Hvidovre Hospital, Hvidovre, Danmark

**Introduktion:** Ældre borgere henvist til almen, kommunalt genoptræningshold (GOP-hold) er en fagligt udfordrende målgruppe pga. meget forskelligt funktionsniveau, komorbiditeter, nedsat funktionsevne og risiko for afhængighed af hjælp. Genoptræningen Hvidovre Kommune ønsker i højere grad end for nuværende at tilbyde borgere på GOP-hold den rette indsats.

**Formål:** At undersøge 1) hvorvidt det er gennemførbart at anvende Rejse-Sætte-Sig test (RSS) og De Morton Mobility

Index (DEMMI) til stratificering af borgere til GOP-hold i forhold til tidsforbruget? 2) sammenhængen mellem RSS- og DEMMI-scoren, og om testscorer kan anvendes til stratificering af borgere? 3) indikerer testene en effekt af træningsindsatsen?

**Design:** Kohortestudie.

**Materiale og metode:** 20 borgere henvist til almen genoptræning i Hvidovre Kommune inkluderes og start- og slut testes med RSS og DEMMI. Borgerne stratificeres til forskellige træningstilbud afhængig af RSS start score hhv. 0-4, 5-8 og  $\geq 9$ ; Rød (holdtræning), Gul (individuel træning) og Grøn gruppe (selvtræning).

**Resultater:** 19 borgere fuldførte forløbet med tests fra september 2016 til marts 2017. Tidsforbruget på DEMMI var 17-13min ved hhv. start og slut test. Der var signifikant korrelation mellem RSS og DEMMI ved start ( $r=0.795$ ,  $p=0.002$ ) og slut test ( $r=0.594$ ,  $p=0.007$ ), samt signifikant forbedring af funktionsniveauet fra start til slut med stigning i RSS på 2 (-2 til 10) gentagelser, og i DEMMI på 9 (-15 til 38) point. 50% af deltagerne scorede  $\leq 6$  i RSS ved start, og blandt deltagere med RSS  $\geq 9$  observeredes ceiling-effekt i DEMMI.

**Konklusion:** Måling af funktionsniveau med RSS og DEMMI er klinisk gennemførbart og kan i nogen grad identificere ændring for borgere i almen genoptræning. DEMMI viste en ceiling-effekt hos borgere med høj RSS, hvilket indikerer at DEMMI ikke er egnet som effektmål i denne gruppe. Disse borgere kan endvidere med fordel stratificeres til funktions-træning på højere niveau end borgere med RSS  $\leq 6$ . Tiltaget medførte ændring af tilbuddet for GOP-holds borgere til niveaudelt træning på to hold samt øget samarbejde mellem ergo- og fysioterapeuter om genoptræningsindsatsen.

**Nøgleord:** DEMMI, RSS, Geriatri, Almen genoptræning, Kommunal genoptræning

**Kort foredrag, torsdag 12.30-12.45, Fyn**

## Is hip muscle strength normalized in patients with femoroacetabular impingement syndrome one year after hip arthroscopic surgery?

*Signe Kierkegaard (1), I Mechlenburg (2,3), B Lund (1), K Søballe (3), U Dalgas (2)*

1) *Hospitalsenheden Horsens, Horsens, Danmark*

2) *Aarhus Universitet, Aarhus, Danmark*

3) *Aarhus Universitetshospital, Aarhus, Danmark*

**Objectives:** Hip arthroscopy (HA) for femoroacetabular impingement syndrome (FAIS) aims to decrease pain and improve functional capacity. Patients with FAIS are predominantly young physically active patients, characterized by decreased hip muscle strength when compared to reference persons (1). The aim of this study was to assess hip muscle strength in patients with FAIS before and one year after HA and compare hip muscle strength with a matched reference group reporting no hip problems.

**Method:** In this prospective, cohort study, patients were eligible for inclusion if they were scheduled for HA and had a diagnosis of FAIS (2). Furthermore, age and gender matched persons reporting no hip problems were included as a reference group. Forty-five patients (mean age 36 years, 26 females) were tested before and one year after HA as were 23 reference persons. Muscle strength was assessed by dynamometry and after submaximal familiarization trials, testing of maximal voluntary contraction was performed isometrically at hip angle of 45 degrees and isokinetically at an angular velocity of 60 degrees/second. Repeated measurements were analyzed with paired t-tests and comparisons between groups were tested by multiple regression analysis adjusted for age and gender.

**Results:** Compared to before HA, patients' concentric, isometric and eccentric hip flexion strength increased by  $13 \pm 21\%$  ( $p < 0.01$ ),  $12 \pm 18\%$  ( $p < 0.01$ ) and  $6 \pm 17\%$  ( $p = 0.01$ ) one year after HA, while improvements in hip extension strength varied much in the group. One year after HA, patients displayed 11-14% lower muscle strength than the reference group, with most comparisons being statistically significant.

**Conclusion:** Despite significant improvements in hip muscle strength one year after HA, patients with FAIS remain weaker than reference persons. This emphasizes the need for further rehabilitation after HA than is currently provided.

### References:

1. Kierkegaard et al. Impaired hip muscle strength in patients with femoroacetabular impingement syndrome. JSMS 2017

2. Griffin et al. The Warwick agreement on femoroacetabular impingement syndrome: an international consensus statement. BJSM 2016

#### Kort foredrag, torsdag 11.45-12.00, lokale 24

### Tendon-related abnormalities identified with ultrasound are common in symptomatic hip dysplasia

*Julie Sandell Jacobsen (1,2), L Bolvig (3), P Hölmich (4), K Thorborg (4), SS Jakobsen (5), K Søballe (5), I Mechlenburg (6)*

1) Department of Physiotherapy, Faculty of Health Sciences, VIA University College, Aarhus N, Denmark

2) Department of Physiotherapy and Occupational Therapy, Aarhus University Hospital, Aarhus C, Denmark

3) Department of Radiology, Aarhus University Hospital, Aarhus C, Denmark

4) Sports Orthopaedic Research Center-Copenhagen (SORC-C), Department of Orthopaedic Surgery, Copenhagen University Hospital, Amager and Hvidovre, Copenhagen, Denmark

5) Department of Orthopaedic Surgery, Aarhus University Hospital, Aarhus C, Denmark

6) Centre of Research in Rehabilitation (CORIR), Institute of Clinical Medicine, Aarhus University, Aarhus C, Denmark

**Introduction:** Hip dysplasia is characterized by reduced acetabular coverage of the femoral head leading to an increased mechanical load on the hip joint and the local acting hip muscles. Potentially, the muscles function close to the hip joint may present with overuse related pain and abnormalities.

**Objective:** The primary aim was to report the prevalence of tendon-related abnormalities identified by ultrasound in 100 patients with hip dysplasia. The secondary aim was to investigate correlations between tendon-related abnormalities identified with ultrasound and muscle-tendon-related pain identified clinically.

**Subjects and Methods:** One hundred patients (17 men) with a mean age of  $29 \pm 9$  years were included. The prevalence of tendon-related abnormalities was identified with a standardized ultrasound examination. Correlations between tendon-related abnormalities identified with ultrasound and muscle-tendon-related pain identified clinically were tested with spearman's rank correlation coefficient.

**Results:** Iliopsoas-, adductor- and abductor-related abnormalities had the highest prevalence (iliopsoas: 50% (95% CI: 40; 60), adductor longus: 31% (95%: 22; 40) and gluteus medius/minimus: 27% (18; 36)). Significant correlations between ultrasound findings and muscle-tendon-related pain were found for the iliopsoas tendon ( $Rho=0.24$  and  $p=0.02$ ) and the gluteus medius/minimus tendons ( $Rho=0.35$  and  $p=0.0004$ ).

**Conclusion:** Tendon-related abnormalities in the hip and groin region are common in patients with symptomatic hip dysplasia, and the ultrasound findings in iliopsoas- and gluteus medius/minimus are low to medium correlated to muscle-tendon-related pain in these structures. This study widens our understanding of hip dysplasia as a disease where bone and muscle-tendon-related abnormalities occur simultaneously.

#### Kort foredrag, torsdag 12.00-12.15, lokale 24

### Progressive resistance training in patients with hip dysplasia scheduled for periacetabular osteotomy

*L Mortensen (1), J Schultz (2), A Elsner (2), SS Jakobsen (1), K Søballe (1), JS Jacobsen (3), S Kierkegaard (4), U Dalgas (2), Inger Mechlenburg (5)*

1) Department of Orthopaedic Surgery, Aarhus University Hospital, Aarhus C, Denmark

2) Section of Sport Science, Aarhus University, Aarhus C, Denmark

3) Department of Physiotherapy, VIA University College, Aarhus N, Denmark

4) Department of Orthopaedic Surgery, Horsens Hospital, Horsens, Denmark

5) Department of Clinical Medicine, Aarhus University, Aarhus C, Denmark

**Objectives:** To examine if progressive resistance training (PRT) is feasible in patients with symptomatic hip dysplasia (HD). A secondary purpose was to investigate patient reported outcomes, muscle performance and hip muscle strength following PRT.

**Materials and Methods:** The patients performed 8-weeks (20 sessions) of supervised PRT consisting of five exercises for the lower extremities. Feasibility was evaluated as adherence, the number of dropouts and adverse events. Visual

analog scale (VAS) was reported after each exercise and one day after training sessions. Pre- and post the intervention, patients completed the Copenhagen Hip and Groin Outcome Score (HAGOS), performed two hop-tests and had their hip extensor and flexor peak torque assessed by isokinetic dynamometry.

**Results:** 16 patients, mean age 28 (range 22-40) years, completed the PRT intervention. No patients dropped out and adherence to training was 90.3%  $\pm$  9.0%. Acceptable pain levels (VAS  $\leq$  50) were reported during 95% of exercise sessions and 92.3% when assessed on the day after a training session. Four out of six HAGOS subscales improved ( $p < 0.05$ ), as did standing distance jump (8.3 cm 95% CI [1.2, 15.3]) and countermovement jump (1.8cm 95% CI [0.7, 2.9]) on the affected side. Isokinetic concentric hip flexion peak torque showed significant improvements (15.8 Nm 95% CI [5.9, 25.8]) on the affected side, as did isometric hip flexion (11.0 NM 95%CI [1.1, 21.0]). A similar improvement was seen during isometric hip flexion on the non-affected side.

**Conclusion:** Supervised PRT is feasible in patients with symptomatic HD. Furthermore, PRT may improve pain levels, patient reported outcomes, functional performance and hip flexion muscle strength.

**Kort foredrag, torsdag 12.00-12.30, lokale 24**

## Effects of supervised exercise compared to home-based exercise after total hip replacement - a meta-analysis of randomised controlled trials

*Sebrina Hansen (1), J Aaboe (2), I Mechlenburg (3), S Overgaard (4), LR Mikkelsen (5)*

1) Center for Rehabilitation, Municipality of Slagelse, Slagelse, Denmark

2) National Clinical Guidelines, Danish Health Authority, Copenhagen, Denmark

3) Centre of Research in Rehabilitation (CORIR), Department of Clinical Medicine, Aarhus University Hospital and Aarhus University, Aarhus, Denmark

4) Orthopaedic Research Unit, Department of Orthopaedic Surgery and Traumatology, Odense University Hospital, Department of Clinical Research, University of Southern Denmark, Odense, Denmark

5) Elective Surgery Centre, Silkeborg Regional Hospital, Silkeborg, Denmark

**Objective:** The objective of the present study was to evaluate the effectiveness of supervised exercise compared to home-based exercise initiated early after Total Hip Replacement (THR). Effectiveness was measured on patient-reported pain, quality of life and function at the end of treatment and in addition at 6-12 months follow-up for function.

**Method:** The systematic review was performed in accordance to the PRISMA statement and was a priori registered at PROSPERO, CRD42017055604. An electronic search was performed in Medline, Embase and Cinahl on January 24th, 2017 from a predefined protocol. Studies that compared supervised exercise to home-based exercise within the first 12 weeks after THR were included. Title/abstract screening, full text evaluation, data extraction and quality assessment were performed by two independent reviewers. Methodological quality was assessed using the Cochrane Risk of Bias tool. Mean difference (MD) with 95 % confidence intervals was calculated using random effects models. A negative MD indicated an improvement in favour of the supervised patients.

**Results:** 1173 records were screened, and 6 studies were included, with a total of 281 patients. A small and non-significant MD in favour of the supervised groups of patients were found in all outcomes: patient-reported function at end of treatment -1.56 (95% CI -4.14 to 1.02), patient-reported function at 6-12 months follow-up -1.70 (95% CI -4.71 to 1.31), hip-related pain -1.64 (95% CI -5.07 to 1.79), health related quality of life -1.14 (95% CI -5.73 to 3.45). The quality of evidence was moderate for all outcomes at end of treatment and low for patient-reported function at 6-12 months follow-up.

**Conclusion:** In conclusion, supervised exercise was not superior to home-based exercise on patient-reported pain, quality of life and function after primary THR patient-reported pain, quality of life and function. Our results do not support the use of supervised exercise after THR as standard rehabilitation. Future studies should focus more on supervised exercises targeted relevant sub-populations among patients with THR.

**Keywords:** Total hip replacement, rehabilitation, supervision, patient-reported outcome, and meta-analysis.

**Kort foredrag, torsdag 12.30-12.45, lokale 24**

## Development and evaluation of a new screening algorithm to improve the referral pattern of outpatient orthopedic knee patients

Lone Ramer Mikkelsen (1), M Garval (1), C Holm (1), ST Skou (2,3)

1) Elective Surgery Centre, Silkeborg Regional Hospital, Silkeborg, Denmark

2) Department of Physiotherapy and Occupational Therapy, Næstved-Slagelse-Ringsted Hospitals, Slagelse, Denmark

3) Research Unit for Musculoskeletal Function and Physiotherapy, Institute of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

**Background:** Many knee patients referred to outpatient orthopedic clinics are not (yet) candidates for surgery and might benefit from conservative treatment and thus being referred to a specialized physiotherapist instead of an orthopedic surgeon (OS). If it is possible to identify relevant patients to refer to the OS it could potentially improve efficiency and quality of care in the outpatient orthopedic clinic. Purpose/Aim of Study: To develop and test a screening algorithm to define appropriateness of referral to OS based on pre-visit patient-reported outcomes and radiographical findings, thereby being applicable prior to clinical examination.

**Materials & Methods:** Prior to clinical examination, 173 consecutive patients with a first-time referral to the outpatient orthopedic clinic completed questionnaires, and radiographic osteoarthritis severity was graded using the Kellgren-Lawrence scale. The gold standard for relevant referral to the OS was based on actual treatments, referral to other medical specialists or further diagnostics. The performance of the algorithm in predicting relevant referrals and total knee replacement (TKR) was assessed using sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV).

**Findings/Results:** Of the 173 patients, 40% (n=69) underwent TKR and further 25% (n=44) were considered relevant to refer to OS due to other reasons than surgery. Sensitivity, specificity, PPV and NPV for prediction of relevant referral to OS were 0.70, 0.56, 0.76 and 0.48, respectively. The corresponding performance estimates for prediction of TKR surgery were 0.92, 0.56, 0.55 and 0.92.

**Conclusions:** The algorithm was able to identify most patients relevant to refer to OS, but was less suitable for identifying those not relevant. The algorithm performed excellent in predicting TKR surgery. With further development, this

screening algorithm might be able to improve the referral pattern and thereby improve patient care and efficiency in the outpatient orthopedic clinic.

**Kort foredrag, torsdag 11.45-12.00, lokale 26**

## Cut-points for maximal knee-extension strength indicating sarcopenia is associated with functional performance four months after hip fracture

Jan Arnholtz Overgaard (1,2), MT Kristensen (1,3)

1) Physical Medicine and Rehabilitation Research - Copenhagen (PMR-C), Denmark

2) Department of Rehabilitation, Lolland Municipality, Maribo, Denmark

3) Departments of Physical Therapy and Orthopedic Surgery, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark

**Introduction:** Debate exists regarding the definition of sarcopenia and when to be sarcopenic. Lately, Menant et al. (1) showed that isometric knee-extension muscle strength cut-points with values of the lowest sex-specific quintile; <23.64 kg for men and <15.24 kg for women, indicating a sarcopenic condition, was associated with health related outcomes.

**Purpose:** To investigate if these cut-points gave similar associations in the outcome of older adults with a hip fracture (HF) after ceased municipality-based rehabilitation.

**Method:** Eighty (62 women) older adults with a mean (SD) age of 76.6(7.8) years (46 with a femoral neck - and 34 with a trochanteric fracture) were evaluated 4 months after HF. Maximal isometric knee-extension strength in the non-fractured limb with cut-points by Menant et al. (1) were compared with the Timed Up & Go test (TUG); the 10-meter walk test (10MWT), and the 6-minute walk test (6MWT).

**Results:** The maximal knee-extension strength of the non-fractured limb was on average 27.7(14.1) kg in men and 16.8(7.4) kg in women ( $p=0.005$ ), and of whom 28% and 26% respectively, had signs of sarcopenia. The group with signs of sarcopenia used significantly ( $p<0.03$ ) more time in the TUG (mean diff. 3.02 [95%CI: 1.67 to 4.37] seconds), walked slower in the 10MWT (0.23 [0.1 to 0.35] meter per second), and walked a shorter distance in the 6MWT (66.64 [29.9 to 103.19] meters), compared to the non-sarcopenic group.

**Conclusion:** Although confirming the findings by Menant et al. (1) in older adults with HF, our findings probably underestimate the presence of sarcopenia in the HF population. Thus, the estimate of approximately 25% with signs of sarcopenia after ceased rehabilitation was established in a group of older adults with a high pre-fracture functional level, which underlines the importance of muscle strength exercises offered to all older adults with HF.

**Reference:**

1) Menant JC et al. Strength measures are better than muscle mass measures in predicting health-related outcomes in older people: time to abandon the term sarcopenic? *Osteoporosis Int* 2016.

**Kort foredrag, torsdag 12.00-12.15, lokale 26**

## Reliability of Barfods ultrasound measurement on patients with an Achilles tendon rupture

*Maria Swennergren Hansen (1), MT Kristensen (2), T Budolfsen (1), K Ellegaard (3), KW Barfod (4)*

1) *Physical Medicine and Rehabilitation Research – Copenhagen (PMR-C), Department of Occupational and Physiotherapy, Hvidovre Hospital, University of Copenhagen, Copenhagen, Denmark*

2) *Physical Medicine and Rehabilitation Research – Copenhagen (PMR-C), Department of Occupational and Physiotherapy and Department of Orthopaedic Surgery, Hvidovre Hospital, University of Copenhagen, Copenhagen, Denmark*

3) *Parker Institute, Frederiksberg Hospital, Copenhagen, Denmark*

4) *Sports Orthopedic Research Center – Copenhagen (SORC-C), Arthroscopic Center, Department of Orthopedic Surgery, Copenhagen University Hospital, Amager-Hvidovre, Copenhagen, Denmark*

**Introduction:** Elongation of the Achilles tendon following rupture is a frequent and overlooked complication and is considered to affect gait, physical function and muscle strength, but the condition is sparsely investigated. Ultrasound is widely used to assess length of the tendon, but little is known concerning reliability. As the landmarks might change over time in the healing process, reliability needs to be assessed repeatedly at relevant time points.

**Aim:** To examine the relative and absolute reliability of Barfods ultrasound measurement in patients with an Achilles tendon rupture treated with or without operation, at time of rupture (T1) and at 2 (T2), 4 (T3) and 12 (T4) months post-rupture, respectively.

**Design:** Reliability study.

**Material and Methods:** The study investigated both legs of 56 patients in total: T1 n=13, T2 n=14, T3 n=13 and T4 n=15. Measurements were made by two raters, blinded to each other's ratings. Repeated measurements were performed by the first rater. Intra-rater and inter-rater reliability were determined. Data were evaluated using the intraclass correlation coefficient (ICC), the standard error of the measurement (SEM) and the minimal detectable change (MDC). Barfods ultrasound measurement was performed according to Barfod et al. 2014. With the patient in prone position the distance from the posterior and most superior corner of the calcaneus to the distal tip of the medial gastrocnemius head was measured.

**Results:** The inter-rater reliability ICC2.1 (95%CI) for the injured side, were: T1 0.84 (0.41-0.95), T2 0.95 (0.84-0.98), T3 0.93 (0.81-0.97) and T4 0.96 (0.86-0.99). The corresponding SEM (SEM%) were: 0.8 cm (3.9%), 0.5 cm (2.5%), 0.5 cm (2.5%), 0.3 cm (1.5%), and MDC (MDC%): 2.2 cm (10.6%), 1.4 cm (7.0%), 1.4 cm (6.9%), 0.8 cm (4.1%). The mean (SD) difference between injured and non-injured side (the elongation) was 2.1cm (1.4) at T1 and 1.7cm (0.9) at T4. Intra-rater reliability showed better ICC values at all time points.

**Conclusion:** Barfods ultrasound measurement showed excellent relative reliability with low measurement error at 4 time points the first year following an Achilles tendon rupture. Average elongation of the injured tendon was 1.7cm one year after rupture.

**Kort foredrag, torsdag 12.15-12.30, lokale 26**

## Comparable effect of partly supervised and self-administered exercise programme in early rheumatoid arthritis – a randomised, controlled trial

Trine Seneca (1), EM Hauge (2), T Maribo (3)

1) Aarhus Universitetshospital, Fysioterapi- og Ergoterapiafdelingen, Aarhus, Danmark

2) Aarhus Universitetshospital, Reumatologisk Afdeling, Aarhus, Danmark

3) Aarhus Universitet Institut for Folkesundhed, MarselisborgCentret Dansk Center for Rehabilitering, Region Midtjylland DEFACTUM, Aarhus, Danmark

**Introduction:** There is a need to establish a framework and exercise level for patients with early rheumatoid arthritis (RA). The aim of this study was to compare the effect of a partly supervised and a self-administered exercise programme for patients with early RA.

**Methods:** A total of 51 patients with early ( $\leq 5$  years) RA were randomised to either a six-week supervised, progressive, high-intensity exercise programme followed by a six-week self-administered exercise programme or a 12-week self-administered exercise programme.

**Results:** A total of 36 patients completed the study. Following the 12 weeks of exercises, patients in the two groups had improved both their muscle strength and their physical fitness. There was a significant difference in Disease Activity Score in 28 joints calculated with C-reactive protein between the two exercise groups, but no significant differences in physical fitness, pain perception, Health Assessment

Questionnaire, Short Form 36 health survey questionnaire, Fear-Avoidance Beliefs Questionnaire, or in muscle strength, except from a significant difference in trunk extensors. The dropout was 40% in the supervised group versus 20% in the self-administered group.

**Conclusions:** A progressive, high-intensity exercise programme is feasible for patients with early RA, although we observed an elevated number of dropouts for reasons not related to the intervention. The partly supervised exercise programme with follow-up after 12 weeks does not seem to be more effective than the self-administered exercise programme.

### Reference:

Trial Registration: The trial was registered with [www.clinicaltrials.gov](http://www.clinicaltrials.gov) (NCT015553305). Dan Med J 2015;62(8):A5127

**Kort foredrag, torsdag 12.30-12.45, lokale 26**

## Objective assessment of postural control after lower limb amputation: a pilot study

Trine Friis Gehlert (1), M Overgaard (2), LK Pedersen (3), KK Petersen (4), K Nordbye-Nielsen (4,5)

1) FysioVital Risskov-Rønde, Aarhus, Denmark

2) Thomsen Fysioterapi, Randers, Danmark

3) Aalborg University Hospital, Aalborg, Danmark

4) Aarhus University Hospital, Aarhus, Danmark

5) Aarhus University, Aarhus, Denmark

**Background:** Postural control might be impaired following lower limb amputation and contributes to a high incidence of falling in people with a lower limb amputation with the risk of an injury occurring. There is no agreement on which objective assessment method is most appropriate for quantifying postural control during rehabilitation. Attention should be pointed to which test is most accurate at detecting a change in postural control after a given intervention.

**Objective:** Four balance tests was compared in order to determine their feasibility in detecting a change in postural control in people with a lower limb amputation during rehabilitation and prosthesis fitting.

**Methods:** Four different balance tests were used as primary outcomes before and after a 4-week rehabilitation programme (n=5). The tests used were Berg Balance Scale (BBS) Timed Up & Go (TUG) and force plate measurements in standing and seated position (FPMstand+seat). Secondary outcome was quality of life assessed by the EQ-5D-5L questionnaire.

**Results:** All participants improved in both BBS (diff: 5 points) and TUG (diff: 10.3 seconds). The total distance of the COP excursions in the FPMstand with prosthesis, eyes open measurements was reduced during the 4-week rehabilitation and prosthesis fitting programme (diff: 308 cm). However, the distance of the COP excursions increased in FPMseat measurements (diff: -72 cm; diff: -109 cm). The EQ-5D-5L questionnaire showed an improvement in quality of life (diff: 3 points) and an increase in VAS-scores (10 mm difference).

**Conclusion:** A change in postural control during rehabilitation and prosthesis fitting in lower limb amputees may be assessed by BBS, TUG and FPMstand.

**Clinical relevance:** A golden standard for quantifying postural control is lacking. Hence, a combination of tests to measure and detect a change in postural control must be used. Present pilot study finds that BBS, TUG and FPMstand



are advantageous as measurements for assessing changes in postural control in the rehabilitation of people with a lower limb amputation.

**Keywords:** Postural control, lower limb amputation, force plate measurements, Berg Balance Scale, Timed Up & Go.

**Kort foredrag, torsdag 11.45-12.00, Odense**

### Translation and cross-cultural adaptation of the Watson 10-meter Walking Test into Danish; performance stability and interrater-reliability in patients following neurological disorders

*Christina Andersen, MT Kristensen  
Halsnæs Kommune, Frederiksværk, Danmark*

**Introduction:** The Ten-metre Walking Test (10MWT) is widely used in research and rehabilitation of older people and different patient groups in Denmark, but a validated Danish version is not available. The objectives were therefore (1) To translate and cross-cultural adapt the "Watson" 10-meter Walking Test (10MWT) into Danish, (2) to determine the number of trials needed to achieve performance stability, and (3) to examine the interrater reliability of the 10MWT in patients with neurological disorders.

**Methods:** The translation was conducted according to international recommendations. A consecutive sample of 50 participants (mean (SD) age of 68.2 (15.6) years) with a neurological disorder were studied at time of discharge from an in-hospital Neurorehabilitation Unit. All participants performed five timed 10MWT (usual speed) with 20-seconds rest intervals between trials, supervised by a physical therapist. A second session was conducted with another physical therapist and separated with a mean of 2.7 (0.9) hours. A computer-generated randomization list secured that each rater supervised the first session 25 times, and blinded to each other's ratings until end of study. Repeated measures ANOVA with Bonferroni corrections determined the number of trials needed to ensure stable 10MWT-scores while the ICC2.1, the standard error of measurement (SEM) and the smallest real difference (SRD95) determined reproducibility.

**Results:** Performances of participants improved until the second trial. The faster of the first two timed trials, reaching a mean (SD; range) of 11.96 (5.40; 5.3-28.1) seconds, was sig-

nificantly faster than the slowest ( $P < 0.001$ ). The ICC (95% CI), SEM and SRD were respectively 0.97 (0.95-0.98), 0.06 m/s and 0.17 m/s, and with no systematic between rater's bias ( $P = 0.86$ ).

**Conclusions:** We suggest the faster of two timed trials be used for the 10MWT in patients following neurological disorders, as we found excellent interrater reliability and low measurement noise using this score, following the standardized Danish 10MWT manual, available from the Danish Physiotherapy Associations webpage for outcome measures. We suggest the manual be validated in other patient groups.

#### Reference:

Watson MJ (2002). Refining the Ten-metre Walking Test for Use with Neurologically Impaired People. *J Physiotherapy* 2012.

**Kort foredrag, torsdag 12.00-12.15, Odense**

### An exercise programme for people with severe polyneuropathy and diabetic foot ulcers - 5 case reports on feasibility and safety

*Kajsa Lindberg (1), BS Møller (2), K Kirketerp-Møller (3), MT Kristensen (4)*

*1) Sundhed & Genoptræning, Sundhedshus Vanløse, Københavns Kommune, Vanløse, Danmark*

*2) Sygeplejeklinikken, Sundhedshus Vanløse, Københavns Kommune, Vanløse, Danmark*

*3) Copenhagen Wound Healing Center Bispebjerg University Hospital, Copenhagen, Denmark*

*4) Physical Medicine and Rehabilitation Research - Copenhagen (PMR-C), Departments of Physiotherapy and Orthopaedic Surgery, Amager-Hvidovre Hospital, University of Copenhagen, Hvidovre, Denmark*

**Introduction:** For people with diabetes, severe polyneuropathy and diabetic foot ulcers, the common view is, that a reduced activity level in terms of restricted walking and exercise is necessary, to make the ulcer heal. Foot ulcers are associated with a major negative effect on quality of life as well as being associated with reduced mobility and ability to perform activities of daily living. Thus, the challenge of combining less accumulated pressure on the foot sole with the benefits from physical exercise exists.

**Aim** of study was to examine an exercise programme for persons with a diabetic foot ulcer in terms of feasibility and safety.

**Methods:** Five men (mean (SD) age of 68.2 (7.1) years) with diabetes, severe polyneuropathy and an active foot ulcer (four wore an removable aircast), participated twice weekly in a 10-week exercise programme, at an outpatient rehabilitation centre. Programme adherence, patient satisfaction, healing of foot ulcers, adverse events, ability to perform activities of daily life, and changes in muscle strength were assessed.

**Results:** All participants completed the programme with a session attendance from 85-95%, and with high satisfaction ( $\geq 9$  points on a 10 point numeric rating scale). Only minor adverse events occurred, and ulcers were reduced for all participants, from a median of 1.9 (IQR, 1.1-7.3) cm<sup>2</sup> to 0.0 (0.0-3.0) cm<sup>2</sup>. The distance on stationary bike improved from a mean (SD) of 3.3 (1.1) to 5.4 (0.5) kilometers, and strength training loads were progressed. Ability to perform in daily life activities improved from a median of 4.3 (2-5) to 6.7 (5-8) points on the Patient Specific Functional Scale (0-10 points). Number of active ankle dorsiflexions improved from a mean of 89.2 (79.6) to 209.6 (127.1), while isometric quadriceps strength improved from a mean of 82.3 (36.9) to 103.0 (40.5) Nm.

**Conclusions:** An exercise program for people with diabetes, severe polyneuropathy and foot ulcers seems feasible and safe. Further studies are needed to confirm these findings.

#### References:

1. Sacco ICN, Sartor CD, Diabetes Metab Res Rev 2016.
2. Goodridge D, J Wound Ostomy Continence Nurs. 2005.

**Kort foredrag, torsdag 12.15-12.30, Odense**

## The effect of early municipality based rehabilitation for dysvascular lower-limb amputee patients

*D Kristensen (1), Nikolaj Odderskær (2), K Lindberg (3), MT Kristensen (4)*

*1) Genoptræningscenter Kildegården, Skanderborg, Danmark*

*2) Fysiosekvens, Aarhus, Danmark*

*3) Sundhed & Genoptræning, Sundhedshus Vanløse, København, Danmark*

*4) Physical Medicine and Rehabilitation Research - Copenhagen (PMR-C), Departments of Physiotherapy and Orthopedic Surgery, Amager-Hvidovre Hospital, København, Danmark*

**Introduction:** In Denmark, more than 1700 lower limb amputations (LLA) are carried out each year. Patient rehabilitation is long and expensive to society, when including expenses to orthopedic surgery, in- and outpatient rehabilitation and endowment of prosthetic limbs. Currently, there is no national clinical guideline for the rehabilitation offered to patients with LLA in Danish municipalities and with the ambition of evidence-based practice in Danish healthcare, a potential heterogeneity in rehabilitation approaches seem problematic. Hence, the aim of this study was to investigate and evaluate the functional effect of a regional, consensus and evidence-based rehabilitation program on a cohort of LLA patients, using three well-known outcome measures.

**Methods:** Data was collected from a cohort of newly amputated, dysvascular LLA patients (33 men and 11 women, mean (SD) age of 67 (9.3) years, 25 below knee amputations (BKA) and 19 above knee amputations (AKA)). All participants completed a one-hour supervised exercise program twice a week, focusing primarily on four main areas: balance, strength, aerobic, and prosthetic gait training. Data was collected before start (baseline) and following completion (discharge) of the program. Functional levels were measured using three standardized tests: 10 Meter Walk Test (10MWT), Timed Up & Go (TUG) and 2 Minute Walk Test (2MWT). Statistical analysis included a series of variance analysis followed by appropriate post hoc and effect size (ES) tests.

**Results:** Patients followed the program for an average (SD) of 17.5 (8.8) weeks, and showed significant ( $p < 0.001$ ) improvements in all three functional outcome measures from baseline to discharge. Performances for the 10MWT improved from a mean (SD) of 0.44 (0.25) meter/second at baseline to 0.74 (0.44) meter/second at discharge (ES=1.06). TUG improved from 34.26 (20.65) seconds to 20.34 (12.92) seconds (ES=1.04), whilst the 2MWT improved from 56.07 (27.19) meters to 82.57 (38.04) meters (ES=0.99).

**Conclusions:** Large improvements were seen in walking speed, endurance and functional mobility for a cohort of LLA patients who followed a specialized municipality-based rehabilitation program. Further long-term intervention studies seem needed to evaluate if further progress can be achieved.

**Reference:**

1. Lindberg K, Kristensen MT (2014). Genoptræningsforløbs-beskrivelse for benamputerede, Region Hovedstaden: <http://bit.ly/2g42rCK>

**Kort foredrag, torsdag 12.30-12.45, Odense**

## Store forskelle kommunerne imellem, når det gælder genoptræningsindsats efter indlæggelse

*Tonny Jæger Pedersen*

*Rehabiliteringsafdelingen, OUH Svendborg Sygehus, Svendborg, Danmark*

**Baggrund:** Ifølge Dansk tværfagligt register for hoftenære lårbensbrud (DrHOFTEBRUD) får 95% af de ældre, der indlægges og opereres efter et hoftenært brud, en almen genoptræningsplan m.h.p. fortsat kommunal genoptræning (1).

DrHOFTEBRUD har derudover en række indikatorer for den sygehusbaserede del af det tværsektorielle forløb, f.eks. tidlig mobilisering og vurdering af basismobilitet. Men der er ikke initieret overvågning af kvaliteten af den fortsatte genoptræningsindsats i primærkommunerne.

Ud over et enkelt spørgeskemastudie (2), så er den kommunale genoptræningsindsats sparsomt belyst.

**Formål:** At undersøge forskelle fire kommuner imellem når det gælder -

- 1) antallet af genoptræningsforløb, der ikke fortsættes i primærkommunen,
- 2) ventetiden fra udskrivelse til opstart, og
- 3) omfanget af kommunal genoptræning.

**Metode:** 195 +65-årige patienter akut indlagt og opereret efter et hoftenært brud blev fulgt konsekutivt frem til 4 måneder efter udskrivelsen.

**Resultater:** 184 ud af de 195 patienter fik en almen genoptræningsplan ved udskrivelsen, hvilket svarer til andelen i DrHOFTEBRUD.

Det viste sig, at 39/184 patienter (21%), på trods af at

de var udskrevet med en almen genoptrænings-plan, ikke fortsatte i et kommunalt forløb. Der er en vis variation kommunerne i mellem, der spænder fra 13% til 26% af borgerne, der ikke får genoptræning efter udskrivelsen.

Medianventetiden fra udskrivelse til opstart af kommunalt forløb var 9 dage. Også her med en vis variation, dvs. fra en medianventetid på 6 dage i kommunen med kortest ventetid, til 14 dage i den kommune hvor ventetiden var længst.

Antallet af timer i kommunal genoptræning efter udskrivelsen var i gennemsnit 16,5 timer. Hvor den kommune der gav mindst træning lå på et gennemsnit på 7,8 timer, lå den kommune der gav mest træning på gennemsnitlig 18,9 timer.

**Reference:**

1) [www.sundhed.dk/content/cms/62/4662\\_hofte-fraktur-årsrapport\\_2017.pdf](http://www.sundhed.dk/content/cms/62/4662_hofte-fraktur-årsrapport_2017.pdf)

2) Kronborg et al; Municipality-based physical rehabilitation after acute hip fracture surgery in Denmark; *Dan Med J* 62/5 (2015)

**Kort foredrag, torsdag 11.45-12.00, lokale 7-8**

## Usefulness of web-based information on COPD rehabilitation

*Lars Morsø*

*Institut for Regional Sundhedsforskning, Center for Kvalitet, SDU, Middelfart, Danmark*

**Introduction:** Recommendations of COPD rehabilitation lies on a solid foundation of evidence. In Denmark a national clinical guideline recommends the provision of COPD rehabilitation. However, implementation of guidelines for COPD rehabilitation is difficult and many patients don't receive rehabilitation.

Referral of patients to rehabilitation relies on accessible and adequate information on content and availability of the programs. Inadequate information could potentially influence patient and referrer adherence to rehabilitation services resulting in barriers for optimal use. In Denmark, information of rehabilitation programs is supposed to be available on a national website.

**Aim:** To examine whether existing web-based information is sufficient to support patients' referral to COPD rehabilitation and whether recommendations for COPD rehabilitation aligns with given information.

**Methods:** We obtained information about available COPD rehabilitation services from the national website <http://www.sundhed.dk>. We scrutinized all information on the website related to services for COPD patients in the region of Southern Denmark. We registered information on seven items: 1) Referral, 2) Target groups, 3) Program content, 4) Setting, 5) Timetable, 6) Logistics 7) Waiting time. Subsequently, we contacted all municipalities to complement this information.

We used definitions from the clinical guideline defining rehabilitation as a service that must contain physical training and that can be combined with other activities (e.g. education, dietary advice, smoking cessation course)

**Results:** Website information showed that all 22 municipalities in the region offered at least 1 rehabilitation service for patients with COPD. Twelve out of 22 offered several services. Complete information on referral procedure and target group was present in 15 and 4 cases respectively. Seventeen municipalities had no information on waiting time. Beside the physical approach that was present in all 22 communities, variation was present for other combined elements in the rehabilitation programs.

**Conclusion:** The study demonstrated variable and insufficient information for COPD rehabilitation in a region equivalent to a fifth of Denmark. Varying and inadequate information might influence adherence to rehabilitation services and lead to inconsistency in the implementation of COPD rehabilitation guidelines. Information indicates that most municipalities in the Region are challenged by recruiting COPD patients to rehabilitation programs and to provide timely rehabilitation.

**Kort foredrag, torsdag 12.00-12.15, lokale 7-8**

## Overcoming challenges of early rehabilitation of discharged patients with chronic obstructive pulmonary disease (COPD) in a Danish region

*Lars Morsø, MS Jensen, C von Plessen*

*Institut for Regional Sundhedsforskning, Center for Kvalitet, SDU, Middelfart, Danmark*

**Background:** Exacerbations of COPD is associated with increased mortality and reduced quality of life. Early rehabilitation after hospital stay reduces the risk of readmission and is widely recommended. Few patients, however, participate in early rehabilitation. In spite of the documented benefits, complex provider, organizational and patient related factors hinder the implementation of early rehabilitation.

**Aim:** To describe both the considerations on how to target issues influencing the uptake of a program of early rehabilitation in the primary health care. To assess the feasibility of a developed rehabilitation program from the patient perspective.

**Methods:** For health care providers to refer to rehabilitation, they need awareness of existing programs, the program has to be feasible and the referral has to be simple. We informed clinicians about programs, elaborated and answered any questions, simplified referral procedures and disseminated guidelines to clinical staff.

To encourage patients to participate in rehabilitation we developed a patient handout and explained rehabilitation to patients. We individualized the rehabilitation program with gradual increase in intensity. After discharge, a COPD nurse contacted patients for reassurance and light exercises. Physiotherapists guided patients through progressing exercises in small groups online. Patients could proceed to rehabilitation with class-based exercises.

We evaluated the effects of the intervention (information, referral procedure, patient handout and rehabilitation program) by referral, completion and readmission rates.

**Results:** Sixteen (23% of discharged patients) were referred and 14 started rehabilitation. Twelve patients completed rehabilitation, all having severe COPD. All started the individualized program within two weeks and proceeded to the online guided exercises within four weeks of discharge. Readmission 30 days; 1 of 16 patients for the rehabilitation group and 8 of 55 for patients not referred. Readmission 90 days; 2 and 11 patients, respectively.

**Conclusion:** Though the referral rate was only 23%, it was higher than shown earlier. Adherence and completion of

the rehabilitation was high, though all patients had severe COPD. Emphasis put into the recruitment of patients did only partly have the intended effect and challenges of getting more patients referred to early post discharge rehabilitation remain.

**Kort foredrag, torsdag 12.15-12.30, lokale 7-8**

## Respiratory physiotherapy - a clinical guideline

*Linette Marie Kofod (1), AH Andersen (2), H Rohde (2), L Bernhard (3), L Schaadt (4), UW Hasselbalch (4), M Mourier (1), SM Versterre (5), MB Larsen (5), S Warming (5)*

1) Amager & Hvidovre Hospital

2) Herlev & Gentofte Hospital

3) Nordsjællands Hospital

4) Bispebjerg & Frederiksberg Hospitaler

5) Glostrup & Rigshospitalet

**Introduction:** The use of respiratory physiotherapy, including methods, dosages, and equipment employed, varies greatly among the physiotherapists in Denmark. The purpose is to develop a regional clinical guideline in areas physiotherapists often encounter in the clinic

**Methods:** A research group consisting of clinical researchers from each hospital in The Capital Region participated. The group identified three important clinical questions: Should patients be offered respiratory physiotherapy if they suffer from: 1) Hyper secretion, 2) Atelectasis, or 3) Acute respiratory failure? A systematic literature search of databases including Pubmed, Embase, CINAHL, Cochrane and Pedro was performed. Studies including adults with respiratory problems related to the three questions were selected. The included literature was assessed independently by two persons. GRADE (Grading of recommendations Assessment, Development and Evaluation) was used to form the recommendations and meta-analysis was made where possible. The recommendations were formulated, followed by a clinical practice recommendation (CPR).

**Results:** Concerning hypersecretion 39 studies were included and represented four main lung conditions: acute exacerbation in COPD (AECOPD), stable COPD, pneumonia, and bronchiectasis. The chosen outcomes were rated with a quality of evidence and an evidence profile created on the findings. Accordingly, based on low-to-moderate quality of

evidence, with no adverse events and low economic costs, four recommendations representing each area were made.

**Conclusion:** The first part of the clinical guideline regarding the question, "Should patients with hypersecretion be offered respiratory physiotherapy?" is now complete. The recommendation on AECOPD is: Patients should not systematically be offered respiratory physiotherapy, as it has little or no effect on secretion clearance, lung function, cough, dyspnea, quality of life, and length of hospital stay. CPR: We suggest ensuring that patients can cough sufficiently. All four recommendations on hypersecretion will be presented at the congress.

This clinical regional guideline is a collaboration between the Association of leading Occupational and Physiotherapists (SLEF) in the Capital Region and the Health Professional Council for lung diseases (SFR).

**Kort foredrag, torsdag 12.30-12.45, lokale 7-8**

## Systematic approach to competence development in written communication

*Helle Østergaard, IB Sørensen*

*Fysioterapi- og Ergoterapiafdelingen, Aarhus*

*Universitetshospital, Region Midt, Aarhus, Denmark*

**Background:** Brief, targeted written communication is a strategic focus area to improve quality of the professional documentation and minimize paperwork to the benefit of the patients.

**Purpose:** To develop the competencies of physiotherapists and occupational therapists in producing precise and useful written texts within the established framework and demands to documentation in the electronic patient file.

**Method:** Between 23 May and 19 September 2016, 130 physiotherapists and occupational therapists at Aarhus University Hospital participated in a competence development project on written documentation. The project was based on recent knowledge on organisations and transfer of knowledge [1] and comprised four teaching and learning sessions and subsequent workshops in 20 sub-groups. Initially, participants' need for developing knowledge, skills and attitudes was identified. Each participant worked with own practice before, during and after the teaching session. To promote transfer of knowledge, participant involvement was a central element.

An official national tool [2] was applied to systematically plan, execute and evaluate the project.

Moreover, the tool was applied to maintain competence development within specific written documentation.

**Result:** The project has led to increased value and effect for the department, staff and stakeholders by systematically describing purpose, planning and identification of new skills and attitudes among participants. The new approach means less use of abbreviations, less technical language and shorter texts. In particular, the benefit of writing a short conclusion was mentioned. The project increased focus on the target group and the needs of collaborators.

**Perspectives:** This project has contributed to identify how to use the electronic patient file and shed light of potentials for development and dilemmas in daily documentation practice.

#### References:

1. Wahlgren B. (2013). Transfer i VEU. National Center for Kompetenceudvikling. Aarhus Universitet.
2. Kompetencesekretariatet. Kompetenceudvikling.dk WWW fremsøgt 8.8.2017: <http://www.kompetenceudvikling.dk/sites/default/files/filer/Projektdesign%20-20fokus%20p%C3%A5%20v%C3%A6rdi%20og%20effekt.pdf>

**Kort foredrag, torsdag 11.45-12.00, lokale 9-10**

## Translation and cross-cultural adaptation of the Chelsea Critical Care Physical Assessment Tool into Danish

*Katrine Astrup Sørensen (1,4), E Corner (2), MG Hansen (3), AMK Petersen (1,4,5)*

1) Department of Physiotherapy and Occupational Therapy, Aarhus University Hospital, Aarhus, Denmark

2) Department of Clinical Sciences, Brunel University London; Department of Surgery and Cancer, Imperial College London; Chelsea and Westminster NHS Foundation Trust, London, UK

3) Aarhus University Hospital, Aarhus, Denmark

4) Centre of Research in Rehabilitation (CORIR), Department of Clinical Medicine, Aarhus University Hospital and Aarhus University, Aarhus, Denmark

5) Department of Clinical Medicine, Aarhus University, Aarhus, Denmark

**Introduction:** A valid measurement tool is important in both clinical practice and research to assess physical function and evaluate treatment effect. The Chelsea Critical Care Physical Assessment Tool (CPAx) has shown to be valid, practical and is a recommended measurement tool. The CPAX has demonstrated great clinimetric properties in measuring physical function in critically ill patients in the intensive care unit (ICU). There is a lack of Danish-language standardised and validated measurement tools to assess physical function in critically ill patients in the ICU. Therefore, we aimed to translate and validate the CPAX tool into Danish, including assessment of cross-cultural adaptations and face validity.

**Method:** We followed the international recommendations for translation and cross-cultural adaptation of outcome measures. During the process of forward-backward translation, synthesis, expert committee and pre-test, some cultural adaptations were needed. A team of physiotherapists with ICU experience pre-tested the Danish version of CPAX among 30 critically ill patients at three different ICUs to investigate user-friendliness and face validity. Furthermore, a focus group interview was carried out to examine face validity of the CPAX tool.

**Results:** Translation and pre-test of the Danish version of CPAX have resulted in a measurement tool with good face validity. Few adaptations were made in the item descriptions, considering agreement between the Danish and the original English version. The physiotherapists pre-testing the translated version evaluated the CPAX tool as appropriate and user-friendly in an ICU setting. The author of the original version of CPAX, Evelyn Corner, approved the Danish translation.

**Conclusion:** The Danish-language version of CPAX appears to be an appropriate and user-friendly tool with good face validity for clinimetric evaluation of physical function of patients in the ICU. This study is the first step towards a validation and implementation of a Danish version of the CPAX tool. However, further research is needed to investigate reliability and responsiveness among patients in the ICU.

**Kort foredrag, torsdag 12.00-12.15, lokale 9-10**

## Inter-tester reliability and responsiveness of the Danish version of The Chelsea Critical Care Physical Assessment Tool

*Katrine Astrup Sørensen (1,3), E Corner (2), AMK Petersen (1,3,4)*

1) Department of Physiotherapy and Occupational Therapy, Aarhus University Hospital, Aarhus, Denmark

2) Department of Clinical Sciences, Brunel University London; Department of Surgery and Cancer, Imperial College London; Chelsea and Westminster NHS Foundation Trust, London, UK

3) Centre of Research in Rehabilitation (CORIR), Aarhus University and Aarhus University Hospital, Aarhus, Denmark

4) Department of Clinical Medicine, Aarhus University, Aarhus, Denmark

**Introduction:** Recently, translation and cross-cultural adaptation of the Chelsea Critical Care Physical Assessment Tool (CPAx) into Danish (CPAx-D) was completed. However, the clinimetric properties of the CPAx-D have not been evaluated. Therefore, we aimed to investigate inter-tester reliability and responsiveness of CPAx-D in a Danish ICU setting.

**Method:** Between January 2017 and June 2017, 66 critically ill patients admitted to Aarhus University Hospital were consecutively included in the study and tested with CPAx-D. The tests were performed by seven physiotherapists with 2-15 years of experience in treating ICU patients. To calibrate the testers prior to the study each physiotherapist tested 13-30 patients with the CPAx-D. Patients who fulfilled the inclusion criteria were randomly assigned to the inter-tester group and assessed by two blinded testers during the same treatment session. A third physiotherapist not involved in the testing procedure performed the treatment session. To evaluate responsiveness of the CPAx-D a follow-up test was carried out in 24 patients at time of ICU discharge. The follow-up test was performed by one of the two testers, who assessed the patient at the pre-test. Floor and ceiling effects were also examined.

**Results:** Mean difference in total CPAx-D score between two testers was 0.3 point (95% confidence intervals (CI): -0.2; 0.3 points) ( $P=0.8$ ). A scatter plot of differences against means revealed no heteroscedacity. The limits of agreement (LOA) were +2.0/- 2.0 points. Standard error of measurement (SEM) was 0.7 point (95% CI: 0.6; 0.9), and the minimal detectable change (MDC) was 2.0 point. The intra class correlation coefficient (ICC) was 0.99 (95% CI: 0.993; 0.997).

The mean difference in CPAx-D score between baseline and follow-up test was 9.8 point (95% CI 6.9; 13.5) ( $P<0.0001$ ). The effect size ratio (ES) was 1.2 and the standardized response mean (SRM) was 1.1. The CPAx scores ranged between 10-37 (baseline) and 10-49 (follow-up).

**Conclusion:** The CPAx-D showed excellent inter-tester reliability with an ICC > 0.95 and a MDC of 2.0 points. Values of ES and SRM were high indicating that measurement tool is responsive. No floor or ceiling effect was present in the study population.

**Kort foredrag, torsdag 12.15-12.30, lokale 9-10**

## EMG evaluering af tre elastikøvelser til sengeliggende patienter

*Stine Stensgaard (1), T Dalager (2), K Søgaard (2), G Sjøgaard (2)*

1) V.Guldmann A/S, Aarhus, Danmark

2) Institut for Idræt og Biomekanik, Syddansk Universitet, Odense, Danmark

**Baggrund:** Sengeleje kan medføre faldende funktionsniveau hos unge og ældre. Selv få dages immobilitet forårsager fald i muskelmasse og styrke. Der er evidens for at styrketræning modvirker dette fald, men ofte begrænses mulighederne for træning af mangel på det rette udstyr.

**Formål:** At evaluere muskelaktiviteten under tre sengeøvelser med elastik.

**Metode:** Syv raske kvinder (gennemsnitsalder 46 år) deltog. Tre øvelser med Thera-Band™ (skulder, albue og hoft ekstension) blev evalueret. Øvelserne blev udført med elastikken monteret i et fikspunkt over sengen. EMG blev målt på 10 muskler (m. triceps brachii, m. biceps brachii, m. latissimus dorsi, m. rectus abdominis, m. external oblique, m. biceps femoris, m. vastus lateralis, og m. rectus femoris) og data er vist relativt til Maximum Voluntary Electrical signal (%MVE). Individuel 8 og 15 repetition maximum (RM) blev defineret ved en kombination af modstand og længde på elastikken. Træningsintensiteten, Rating of Perceived Exertion (RPE) blev målt med Borgs 10 points skala, hvor 10 repræsenterer max anstrengelse.

**Resultater:** Skulder ekstension aktiverede primært m. triceps brachii med 38%MVE for 8RM og 36%MVE for 15RM, m. biceps brachii (8RM: 36%MVE og 15RM: 33%MVE), og m. latissimus dorsi (8RM: 28%MVE og 15RM: 24%MVE)

Albue ekstension aktiverede primært m. triceps brachii med 31%MVE for 8RM og 31%MVE for 15RM, m. biceps brachii (8RM: 29%MVE og 15RM: 29%MVE), og m. latissimus dorsi (8RM: 23%MVE og 15RM: 25%MVE).

Liggende hofte ekstension aktiverede primært m. biceps femoris med 29%MVE for 8RM og 28%MVE for 15RM samt m. rectus femoris med 14%MVE for 8RM og 14%MVE for 15RM.

Der var ikke signifikant forskel mellem RPE for 8RM og 15RM. Mean RPE for 8RM = 8 (SD:1) og 15RM = 8 (SD:1)

**Diskussion:** Ved at montere en elastik i et fikspunkt over sengen, blev tre forskellige øvelser tilgængelige og kunne individualiseres afhængig af elastikkens farve samt længde til fikspunkt. EMG målingerne viste, at de tre valgte øvelser rammer forskellige muskelgrupper. Dette studie supplerer andre studier, der fremhæver forebyggende intensiv styrketræning under hospitalsindlæggelse. Det er vigtigt at undersøge mulighederne for at underbygge en mere optimal rekonvalescens periode hos postoperative patienter.  
Nøgleord: Sengetræning, styrketræning, elastikøvelser

**Kort foredrag, torsdag 12.30-12.45, lokale 9-10**

## How do physical therapists manage headache in primary care?

*Ditte Rosenberg (1), C Beier (2), L Jensen (2), K Brorsbøl (2), B Rasmussen (3)*

1) Pain and Headache Clinic, Aarhus University Hospital, Aarhus, Denmark

2) VIA University College, Aarhus, Denmark

3) Danish Pain Research Center, Aarhus University Hospital, Aarhus, Denmark

**Background and Aims:** At present, there are no clinical guidelines for non-pharmacological treatment of headache. Manual therapy, physical training, and acupuncture are frequently prescribed as a supplement to pharmacologic analgesics. Likewise, clinical protocols should reflect the type of headache so treatment outcomes are optimized. The International Headache Society recommends that clinical outcome measures include frequency, intensity, and duration of pain. This study investigates how physical therapists (PTs) in primary care manage headache, their choice of therapeutic protocols, ability to classify headache types, and their use of outcome measures.

**Method:** From Autumn 2016 to Autumn 2017, two focus groups collected data on the topics under study via semi-structured interviews with seven PTs. This data was subsequently used to create a detailed, web-based questionnaire which was distributed to 508 PTs.

**Results:** 101 practicing PTs completed the survey. The importance of the clinical assessment was prioritized, with 55% emphasis on anamnesis and 37% and 8% on clinical and paraclinical tests, respectively. Inquiries to generic "red flags" were done by 94% PTs, musculoskeletal, and tendon reflexes by 96% and 70%, respectively. Treatment protocols consisted primarily of education, ergonomics, physical training, and manual therapy. Acupuncture and electrotherapy were used to a lesser extent. Of the responders, 67% classified headache types correctly. Overall, the PTs used frequency, pain intensity, and duration as outcome measures, and around 40% used function-related outcome measures.

**Discussion and Implications:** PTs seem to be in line with the non-pharmacological treatment of headache frequently described in RCT's and systematic reviews despite the lack of clinical guidelines. An increased emphasis on the anamnesis, red flags related to neurological conditions, improvement of classifying headache, and more individualized therapy might improve physical therapists' management of headache. However, the results must be taken with reservations due to the low response rate.

### References:

1 Luedtke K, Allers A, Schulte LH, May A. Efficacy of interventions used by physiotherapists for patients with headache and migraine-systematic review and meta-analysis. *Cephalalgia* 2016 Apr;36(5):474-492.

2 Carville S, Padhi S, Reason T, Underwood M, Guideline Development Group. Diagnosis and management of headaches in young people and adults: summary of NICE guidance. *BMJ* 2012 Sep 19;345:e5765.

**Kort foredrag, torsdag 11.45-12.00, lokale 6**

## Test-retest reliability of exercise-induced hypoalgesia after aerobic and isometric exercises in humans

*Henrik Bjarke Vægter*

*Smertecenter Syd, Odense Universitetshospital, Klinisk Institut, Syddansk Universitet, Odense, Danmark*

**Objective:** Aerobic and isometric exercises decrease pressure pain sensitivity at exercising and non-exercising muscles known as exercise-induced hypoalgesia (EIH). So far no studies have assessed test-retest-reliability of EIH. This study investigated the EIH on pressure pain thresholds



(PPTs) after incremental bicycling exercises and isometric wall squat exercises. The relative and absolute test-retest reliability of the PPT as test stimulus and the EIH responses at exercising and non-exercising muscles were calculated.

**Methods:** Sixty-nine healthy subjects (mean age: 23.1±2.2 years; [range 20–30 years]; 30 women) were included in this study. In two identical sessions, PPTs at the thigh and shoulder were assessed in 34 healthy subjects (13 women) before and after 15 min quiet rest and 15 min bicycling, and in 35 healthy subjects (17 women) before and after a 3 min quiet rest condition and a 3 min wall squat exercise. Habitual physical activity was assessed by the International Physical Activity Questionnaire (IPAQ). Relative and absolute test-retest reliability of PPT and EIH was determined using analysis of variance (ANOVA), intraclass correlation coefficients (ICCs), and PPT standard error of measurements (SEM) to determine EIH responders and non-responders.

**Results:** PPTs at exercising and non-exercising muscles were increased after bicycling (18.5±17.2% and 12.7±27.3%, respectively) and wall squat (16.8±16.9% and 6.7±12.9%, respectively) ( $P<0.05$ ). PPTs showed excellent ( $ICC\geq 0.84$ ) within-session and between-sessions test-retest reliability. The EIH response at exercising and non-exercising muscles after aerobic exercise demonstrated fair ( $ICC=0.45$ ) between-sessions test-retest reliability, but low ( $ICCs: 0.03-0.43$ ) test-retest reliability after wall squat. Agreement in EIH responders between sessions was not significant ( $\kappa<0.24$ ,  $P>0.15$ ). A positive correlation was found between the IPAQ score and PPT at the quadriceps muscle ( $r=0.44$ ,  $P<0.009$ ).

**Conclusions:** Incremental bicycling and wall squat exercises increased PPTs compared to the control condition. Absolute and relative reliability of the EIH responses was generally low to fair making EIH results less reliable for individually based assessment. These data might have impact on future studies investigating EIH and for clinicians designing exercise programs for pain relief. Future research is warranted to optimize reliability of EIH interventions and to investigate the reliability of EIH in clinical pain populations.

**Kort foredrag, torsdag 12.00-12.15, lokale 6**

## The smallest worthwhile effects of physiotherapy for neck, shoulder and low back pain: how low can we go?

*David Høyrup Christiansen (1,2), N-B de Vos Andersen (2), PH Poulsen (1), R Ostelo (3,4)*

*1) Arbejdsmedicin, Universitets Klinik, Hospitalsenheden Vest, Herning, Danmark*

*2) Afdeling for Kvalitet og Lægemedler, Region Midtjylland, Viborg, Danmark*

*3) VU University, Department of Health Sciences, Amsterdam, The Netherlands*

*4) VU University Medical Centre, Department of Epidemiology and Biostatistics, Amsterdam, The Netherlands*

**Background:** Results from clinical trials have supported the use of physiotherapy (manual therapy and exercise) for neck, shoulder and low back pain, but methods to determine whether the observed treatment effects are of clinical significance is an ongoing topic of discussion. The smallest worthwhile effect (SWE) of an intervention is the smallest beneficial effect, taking into account the cost, potential side effects and inconveniences of that intervention, large enough to justify the use of the intervention in clinical practice.

**Objectives:** To determine and compare estimates of the SWE for physiotherapy in neck, shoulder and low back patients, and to investigate the influence of socio-demographic, clinical and psychological factors on these estimates.

**Methods:** The study was nested in a larger prospective cohort study of patients seeking physiotherapy for neck, shoulder or low back pain in 21 physiotherapy practices across Denmark. A structured telephone interview was performed in 160 patients before physiotherapy treatment was commenced. The benefit-harm-trade off method was used to estimate SWE for the outcomes; pain, disability and time to recovery. Possible influence of patient characteristics and intake scores was examined by regression analyses.

**Results:** The median SWE for additional improvement on pain and disability was 20% (interquartile range [IQR] 10–30) and median SWE for time to recovery was 10 days (IQR 7–14) over a period of six weeks. These estimates did not differ with respect to pain location (neck, shoulder or back), past experience with physiotherapy or having private health insurance, but seems influenced by other factors such as age, regular usage of pain medication and work status.

**Conclusion:** People with neck, shoulder and low back pain needs to see at least 20% additional improvement on pain

and disability over natural recovery to consider the effect of physiotherapy to be worth its costs, potential side effects and inconveniences.

**Implications:** Findings from this study may guide clinicians and policy makers when interpreting findings from clinical trials, setting standards when monitoring clinical guidelines. It may also allow researchers to design trials sufficiently powered to detect effects that a typical patient seeking physiotherapy would consider large enough to be worthwhile.

#### Kort foredrag, torsdag 12.15-12.30, lokale 6

### Clinical course and prognosis of musculoskeletal pain in patients referred for physiotherapy: does pain site matter?

Nils-Bo de Vos Andersen (1), P Kent (2), J Hjort (3), DH Christiansen (4)

1) Afdeling for Kvalitet og Lægemidler, Region Midtjylland Viborg, Denmark

2) School of Physiotherapy and Exercise Medicine, Curtin University, Perth, Australia & Department of Sports Medicine and Biomechanics, University of Southern Denmark, Odense, Denmark

3) Aarhus University, Department of Clinical Medicine, Aarhus, Denmark

4) Regional Hospital West Jutland - University Research Clinic Department of Occupational Health, Herning, Denmark

**Background:** Danish patients with musculoskeletal disorders are commonly referred for primary care physiotherapy treatment but little is known about their general health status, pain diagnoses, clinical course and prognosis.

The objectives of this study were to 1) describe the clinical course of patients with musculoskeletal disorders referred to physiotherapy, 2) identify predictors associated with a satisfactory outcome, and 3) determine the influence of the primary pain site diagnosis relative to those predictors.

**Methods:** This was a prospective cohort study of patients (n = 2,706) newly referred because of musculoskeletal pain to 30 physiotherapy practices (Jan - May 2012). Data were collected via a web-based questionnaire 1-2 days prior to the first physiotherapy consultation and at 6 weeks, 3 and 6 months, from clinical records (including primary musculo-

skeletal symptom diagnosis based on the ICPC-2 classification system), and from national registry data. The main outcome was the Patient Acceptable Symptom State. Potential predictors were analysed using backwards step-wise selection during longitudinal Generalised Estimating Equation regression modelling. To assess the influence of pain site on these associations, primary pain site diagnosis was added to the model.

**Results:** Of the patients included, 66% were female and the mean age was 48 (SD 15). The percentage of patients reporting their symptoms as acceptable was 32% at 6 weeks, 43% at 3 months and 52% at 6 months. A higher probability of satisfactory outcome was associated with place of residence, being retired, no compensation claim, less frequent pain, shorter duration of pain, lower levels of disability and fear avoidance, better mental health and being a non-smoker. Primary pain site diagnosis had little influence on these associations, and was not predictive of a satisfactory outcome.

**Conclusion:** Only half of the patients rated their symptoms as acceptable at 6 months. Although satisfactory outcome was difficult to predict at an individual patient level, there were a number of prognostic factors that were associated with this outcome. These factors should be considered when developing generic prediction tools to assess the probability of satisfactory outcome in musculoskeletal physiotherapy patients, because the site of pain did not affect that prognostic association.

#### Kort foredrag, torsdag 12.30-12.45, lokale 6

## FREDAG 13. APRIL

### Reliability of clinical assessment methods for assessing scapular position and function. An inter-rater reliability study

*Camilla Marie Larsen (1,2,3), K Søgaard (1), H Eshøj (4), K Ingwersen (5), B Juul-Kristensen (1)*

1) Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

2) Health Sciences Research Centre, University College Lillebaelt, Odense, Denmark

3) Department of Physiotherapy, University College Lillebaelt, Odense, Denmark

4) Quality of Life Research Center, Department of Haematology, Odense, Denmark

5) Department of Rehabilitation, Hospital Lillebaelt – Vejle Hospital, Vejle, Denmark

**Introduction:** Evaluation of the scapular position and function is important when examining patients with shoulder pain. Static and dynamic test assessments may provide greater insight into scapular position and function and related pathologies. However, clinimetric properties of such test assessment methods are lacking in a population with scapular winging (dyskinesia). Therefore, the aim of this study was to assess the inter-rater reliability of selected static, semi-dynamic and dynamic test assessment methods for evaluating scapular positioning and function.

**Methods:** A standardized three-phase protocol for reliability studies was followed, including training, overall agreement and actual study phase. In total, 41 participants, aged 18-56 (21 with obvious scapular winging) were included in the study phase. Ten test assessment methods (two static, three semi-dynamic and five dynamic evaluations) of the scapular positioning and function were evaluated. Intraclass correlation coefficients (ICC), Standard error of measurements (SEM), limits of agreement (LOA), minimal detectable change (MDC), Cohens kappa (k) and Prevalence-And-Bias-Adjusted-Kappa (PABAK) were computed.

**Results:** Bland Altman plots showed no funnel effects, though, systematic bias and significant differences between raters were present in 4 of the included 10 test assessment methods. The two static test assessment methods showed ICC values between 0.62-0.64. In the semi-dynamic test assessment methods, ICC values ranged from 0.25-0.92, with Acromial distance having the highest ICC (0.82-0.92), and scapular upward rotation having the lowest ICC (0.25-0.47). Three of five dynamic test assessment methods presented with ICC between 0.47-0.68. For the two remaining dynamic assessment methods, kappa varied between -0.34-0.71. Using PABAK, kappa increased to 0.54-0.86.

**Conclusion:** In a population of sports-active participants with and without obvious scapula dyskinesia, three of ten assessment methods showed satisfactory inter-tester reliability (Travelling distance, Acromial distance and Winging scapula). Future research should focus on diagnostic accuracy and responsiveness of these methods. Scapular test assessment methods, such as Lower horizontal distance, Alignment, Initial scapular movement, Proprioception, Maximum shoulder internal rotation, Scapula upward rotation and Scapular observation with multiple categories, had no satisfactory reliability. Therefore, further standardization of these methods is required.

**Kort foredrag, fredag 10.40-10.55, Sjælland**

### Conservative treatment for patients with subacromial impingement: Changes in clinical core outcomes and their relation to specific rehabilitation parameters

*Mikkel Bek Clausen (1,2,3), MB Merrild (1), A Witten (2), KB Christensen (4), M Zebis (1), P Hölmich (2), K Thorborg (2,3)*

1) Department of Physiotherapy and Occupational Therapy, Faculty of Health and Technology, Metropolitan University College, Copenhagen, Denmark

2) Sports Orthopaedic Research Center – Copenhagen, Department of Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, Denmark

3) Physical Medicine and Rehabilitation Research-Copenhagen (PMR-C), Amager-Hvidovre Hospital, Copenhagen University Hospital, Copenhagen, Denmark

4) Department of Biostatistics, University of Copenhagen, Copenhagen, Denmark

**Introduction:** Impaired strength in external rotation (ER-Strength) and abduction (AB-Strength), as well as abduction range of motion (AB-ROM), is reported in patients with Subacromial impingement (SIS), with patients lacking ~50% to reach the levels of the healthy opposite shoulder or healthy controls. However, strength improvements are often limited in controlled trial-settings, and unknown in real-life practice settings.

The purpose of this study was, 1) to describe changes in ER-Strength, AB-strength, AB-ROM, patient-reported function and pain, and 2) to explore the association between changes in subjective and objective outcomes and specific rehabilitation parameters, in conservatively treated SIS-patients.

**Methods:** In this observational study, patients diagnosed with SIS using predefined criteria's underwent testing of AB-ROM, ER-Strength and AB-Strength, pain during each test (NRS:0-10), Shoulder Pain and Disability Index (SPADI: 0-100) and average pain (NRS:0-10). Assessments were conducted immediately before the initial diagnostic evaluation and again six months later. Between testing sessions the patients followed the usual conservative treatment for SIS with no interference from the researchers. Rehabilitation parameters (amount of Physio-sessions, corticosteroid injection and Exercise-time) were recorded at follow-up. Changes in outcomes were analyzed using Wilcoxon Signed-Rank test and the corresponding effect sizes (ES) were estimated. The associations between changes in outcomes and rehabilitation parameters were explored using multiple regression analyses including the baseline score of the relevant outcome as covariate. A significance level of 0.05 was applied.

**Results:** Sixty-three patients completed both baseline and follow-up testing. Significant improvements were seen in SPADI (19 points, ES:0.53,  $p < 0.001$ ) and all pain variables (median 1-1.5 points, ES:0.26-0.39,  $p < 0.01$ ), but not in AB-ROM, ER-Strength and AB-Strength (ES:0.9-0.12,  $p > 0.2$ ). A higher number of Physio-sessions was significantly associated with larger improvements in ER-Strength (0.6 Newton/session,  $p=0.048$ ), and higher Exercise-time was significantly associated with decrease in average pain (-0.2 points/1000min.,  $p=0.048$ ).

**Conclusion:** Medium to large effect sizes were seen for patient-reported function and pain in conservatively treated SIS-patients after six months. Surprisingly, strength and ROM did not improve. Only minor, significant associations between rehabilitation parameters and outcomes were identified. Collectively, these findings challenge the effectiveness of current rehabilitation on important clinical outcomes, such as strength and ROM.

**Kort foredrag, fredag 10.55-11.10, Sjælland**

## Surface electromyography of forearm and shoulder muscles during violin playing

*Stephanie Mann (1), M Panduro (2), RW Hansen (1), HM Paarup (3), L Brandt (2), K Søgaard (1)*

*1) Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Copenhagen, Denmark*

*2) Department of Occupational and Environmental Medicine, Odense, Denmark*

*3) Department of Clinical Immunology, Odense University Hospital, Odense, Denmark*

**Introduction:** Shoulder and forearm pain are common among musicians. It has been demonstrated that particularly violinists experience higher levels of musculoskeletal pain compared to other musicians. [1] To understand the underlying physical mechanism in order to prevent injuries among violinists it is important to quantify the workload in the forearm and shoulder muscles while playing.

This study aims to quantify the relative workload for shoulder and forearm muscles during scales as well as during a music piece.

**Methods:** The study was conducted on highly skilled violinists players, who could perform the required repertoire satisfactorily.

The protocol consisted of an A- and E-major scale and a music piece. EMG was recorded bilaterally from the descending part of trapezius and for both forearm muscles: m. flexor digitorum superficialis, m. extensor carpi ulnaris, m. extensor digitorum communis and m. extensor carpi radialis. Maximal voluntary contractions were conducted with shoulder elevation and maximal handgrip for normalization of EMG (MVE). One-way repeated ANOVA was used to determine if there were differences between the playing tasks. A significance level  $p=0.05$  was chosen.

**Results:** The study population comprised 18 violinists, mean age 42 ( $\pm 15$ ). The %MVE results for each muscle for left and right arm during the resting position (not playing), the A- and E-scale and the music piece were analysed.

There was overall no significant difference between the scales and the music piece with a relative workload level  $< 15\%$ MVE. A difference in %MVE between the resting position and the music piece ( $p=0.001$ ) for all forearm muscles were found. The results show a dynamic load especially for the left forearm muscles (between 8.55-25.1 %MVE) and a general constant workload level for the shoulder muscles around 12%MVE.

**Conclusions:** The use of scales as a standardised work task

seems in general to provide a representative estimate for the load during actual playing.

**Reference:**

Nyman T, Wiktorin C, Mulder M, Johansson YL. Work postures and neck-shoulder pain among orchestra musicians. *Am J Ind Med.* 2007 May;50(5):370-376

**Kort foredrag, fredag 11.10-11.25, Sjælland**

**Maximal hip and knee muscle strength are not related to neuromuscular pre-activity during sidecutting manoeuvre: a cross-sectional study**

*Rasmus Husted (1,2), J Bencke (1), P Hölmich (3), LL Andersen (4,5), K Thorborg (3), T Bandholm (2), B Gliese (6), HB Lauridsen (1), G Myklebust (7), P Aagaard (8), M Zebis (9)*  
 1) Human Movement Analysis Laboratory, Department of Orthopaedic Surgery, Copenhagen University Hospital, Amager-Hvidovre, Hvidovre, Denmark  
 2) Optimed, Clinical Research Centre, Copenhagen University Hospital, Amager-Hvidovre, Hvidovre, Denmark  
 3) Sports Orthopedic Research Center - Copenhagen (SORC-C), Department of Orthopedic Surgery, Copenhagen University Hospital, Amager-Hvidovre, Hvidovre, Denmark  
 4) National Research Centre for the Working Environment, Copenhagen, Denmark  
 5) Physical Activity and Human Performance Group, SMI, Department of Health Science and Technology, Aalborg University, Aalborg, Denmark  
 6) Department of Orthopedics, Clinical Orthopaedic Research Hvidovre (CORH), Copenhagen University Hospital, Amager-Hvidovre, Copenhagen, Denmark  
 7) Oslo Sport Trauma Research Center, Norwegian School of Sport Sciences, Oslo, Norway  
 8) Department of Sports Sciences and Clinical Biomechanics, SDU Muscle Research Cluster (SMRC), University of Southern Denmark  
 9) Department of Physiotherapy and Occupational Therapy, Faculty of Health and Technology, Metropolitan University College, Copenhagen, Denmark

**Background:** Reduced lower extremity muscle strength as well as reduced lower extremity muscle pre-activity during high-risk movements are factors related to increased risk of non-contact ACL injury in adolescent female athletes. A strong relationship exists between muscle strength and

muscle activity obtained during an isometric contraction, however, whether these two measures are related when muscle activity is obtained during a movement associated with a high risk of non-contact ACL injury is not known. Absence or presence of such a relationship may have implications for which training modalities to choose in the prevention of ACL injuries.

**Purpose:** The purpose of this study was to examine the relationship between maximal muscle strength of the hip extensors, hip abductors and knee flexors and the pre-activity of these muscle groups recorded during a sidecutting manoeuvre (high-risk movement) in adolescent female football and handball athletes.

**Study design:** Cross-sectional study.

**Methods:** Eighty-five adolescent (age 16.9±1.2 years) female elite handball and football athletes were assessed for maximal hip extensor, hip abductor and knee flexor muscle strength; and muscle pre-activity (electromyography recordings 10 ms time interval prior to foot ground contact) of the m. gluteus maximus, m. gluteus medius, m. biceps femoris and m. semitendinosus during standardized sidecutting manoeuvre.

**Results:** The results of the correlation analyses demonstrated poor and statistically non-significant correlations. Maximal hip extensor force (N/kg bw) and Gmax pre-activity [ $r_s = 0.012$  (95% CI -0.202 - 0.224),  $p = 0.91$ ], maximal hip abductor force (N/kg bw) and Gmed pre-activity [ $r_s = 0.171$  (95% CI -0.044 - 0.371),  $p = 0.11$ ], maximal knee flexor force (N/kg bw) and BF pre-activity [ $r_s = 0.049$  (95% CI -0.166 - 0.259),  $p = 0.65$ ], and maximal knee flexor force and ST pre-activity [ $r_s = 0.085$  (95% CI -0.131 - 0.293),  $p = 0.44$ ].

**Conclusion:** In the present exploratory study, the results imply that no relationship exists between maximal lower extremity isometric muscle strength and lower extremity muscle pre-activity during sidecutting. This means that athletes with low muscle strength may not necessarily demonstrate high (or low) muscle pre-activity during sidecutting - a well-known risk movement for sustaining non-contact ACL injury.

**Kort foredrag, fredag 10.40-10.55, Jylland**

## Quadriceps muscle activity during commonly used strength training exercises shortly after total knee arthroplasty: implications for home-based exercise-selection

Thomas Linding-Jakobsen (1,3,4,6), MD Jakobsen (2), LL Andersen (2,8), H Husted (5), H Kehlet (4,7), T Bandholm (3,5,6)

1) Section for Orthopaedic & Sports Rehabilitation (SOS-R), Health Centre Nørrebro, Copenhagen, Denmark

2) National Research Centre for the Working Environment, Copenhagen, Denmark

3) Physical Medicine & Rehabilitation Research – Copenhagen (PMR-C), Department of Physical Therapy, Copenhagen University Hospital, Hvidovre, Denmark

4) Lundbeck Foundation Centre for Fast-track Hip and Knee Arthroplasty, Copenhagen University Hospital, Hvidovre, Denmark

5) Department of Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, Denmark

6) Clinical Research Centre, Copenhagen University Hospital, Hvidovre, Denmark

7) Section for Surgical Pathophysiology 4074, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark

8) Physical Activity and Human Performance Group, SMI, Department of Health Science and Technology, Aalborg University, Aalborg, Denmark

**Objective:** The objective was to investigate if strength training exercises (STE) performed in machines would be superior to STE performed in more simple forms in voluntary quadriceps muscle activation in the operated leg early after total knee arthroplasty (TKA).

**Design:** A cross-sectional electromyographic study investigated the voluntary muscle activity in the operated leg of 6 different STE. Twenty-four patients performed the STE in a randomized order, using a pre-determined loading corresponding to 10RM (repetition maximum). The voluntary muscle activity (%EMGmax) was calculated for the quadriceps and the hamstrings for each exercise.

**Results:** The knee-extension with elastic band showed significant higher voluntary quadriceps muscle activation than knee extension in machine (93.3 vs. 74.9; mean difference, 18.3 %EMGmax [95% confidence interval (CI), 11.7 to 24.9];  $P < 0.0001$ ). Similarly, one-legged squat (and sit to stand) elicited higher voluntary quadriceps muscle activation than leg press in machine (86.7 vs. 66.8; mean difference, 19.9 %EMGmax [95% CI, 14.8 to 25.0];  $P < 0.0001$ ).

**Conclusion:** STE in more simple forms elicited higher voluntary quadriceps muscle activation than STE in machines in patients with early TKA. STE with high voluntary quadriceps muscle activation can be performed at home using simple bodyweight exercises or elastic bands.

### Reference:

Clinical Trials: Gov-identifier: NCT01708980

**Kort foredrag, fredag 10.4550-11.10, Jylland**

## Low physical performance is associated with developing pulmonary complications following acute high-risk abdominal surgery

Line Rokkedal Jønsson (1), LH Ingelsrud (2), LT Tengberg (3), T Bandholm (1,2,4), NB Foss (5), MT Kristensen (1,2)

1) Department of Physiotherapy and Occupational Therapy, Copenhagen University Hospital, Hvidovre, Denmark

2) Department of Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, Denmark

3) Gastro Unit Surgical Division, Copenhagen University Hospital, Hvidovre, Denmark

4) Clinical Research Center, Copenhagen University Hospital, Hvidovre, Denmark

5) Department of Anesthesiology and Intensive Care Medicine, Copenhagen University Hospital, Hvidovre, Denmark

**Background:** Acute high-risk abdominal (AHA) surgery is defined as immediate emergency laparoscopy or laparotomy primarily due to intestinal obstruction, perforated viscus or bowel ischemia. AHA surgery is associated with high mortality rates and multiple postoperative complications, of which pulmonary complications are common. However, the knowledge of the association between pulmonary complications and functional performance following AHA surgery is limited. We therefore evaluated the association between physical performance and pulmonary complications in patients following AHA surgery in a prospective cohort study.

**Methods:** 50 patients undergoing AHA surgery was consecutively enrolled from a university hospital in Denmark. In the first postoperative week, all patients were evaluated daily with regards to physical performance, using the Cumulated Ambulation Score (CAS, 0-6 points) for basic mobility and the activePAL monitor for the 24-hour physical activity level.

A postoperative pulmonary complication was only considered relevant if it had a Clavien Dindo Classification grade above 1.

**Results:** During hospitalization, 17 patients (34%) developed a pulmonary complication, within a mean of 3.3 (SD:2.5) days after surgery. Seven patients died within the first postoperative week, of which 5 developed a pulmonary complication. 15 out of 43 (35%) of the patients who survived were still not independently mobilized (CAS<6) on postoperative day 7. Not being independently mobilized was associated with pulmonary complications (53% versus 14% in those with CAS=6, P=0.01), equal to an odds ratio of 0.15 (95% CI, 0.03-0.63). Patients developing pulmonary complications also lay or sat more minutes on postoperative day 7 (p=0.04).

**Conclusion:** Patients developing pulmonary complications were less independent and more sedentary within the first week following AHA. Causality cannot be determined, but further studies investigating strategies for an enhanced early mobilization program in the immediate postoperative period following AHA surgery, seems urgently needed.

**Kort foredrag, fredag 9.55-10.10, lokale 24**

## Detaljeret beskrivelse af en kompleks rehabiliteringsintervention til patienter med lænderygsmærter

*Anne Mette Schmidt (1,2,3), HT Maindal (3,4), TB Laurberg (1,5), B Schiøttz-Christensen (6,7), C Ibsen (2,6), KB Gulstad (1), T Maribo (2,3)*

1) Sano, Højbjerg, Danmark

2) DEFACTUM, Region Midtjylland, Aarhus C, Danmark

3) Institut for Folkesundhed, Aarhus Universitet, Aarhus C, Danmark

4) Steno Diabetes Center Copenhagen, Region Hovedstaden, København, Danmark

5) Reumatologisk Afdeling, Aarhus Universitetshospital, Region Midtjylland, Aarhus C, Danmark

6) Rygcenter Syddanmark, Sygehus Lillebælt, Middelfart, Danmark

7) Institut for Regional Sundhedsforskning, Syddansk Universitet, Middelfart, Danmark

**Indledning:** Evidensbaseret fysioterapeutisk praksis kræver blandt andet implementering af resultater fra kliniske studier. Hvis interventionerne i de kliniske studier ikke er tilstræk-

kelig detaljeret beskrevet står fysioterapeuterne med en væsentlig barriere i forhold til at implementere effektive interventioner i klinisk praksis. Dernæst udfordres forskere, som ønsker at eftergøre studiet.

Anerkendelsen af de fysiske, psykiske og sociale konsekvenser af lænderygsmærter har resulteret i udviklingen af den biopsykosociale model i forståelse for og behandlingen af lænderygsmærter. Tværfaglig rehabilitering med en biopsykosocial tilgang er derfor anerkendt som behandlingsindsats til denne patientgruppe. Tværfaglig rehabilitering af patienter med lænderygsmærter er, som meget andet inden for det fysioterapeutiske område, en kompleks intervention. Det komplicerer en detaljeret beskrivelse af interventionen. På trods af stor forskningsaktivitet indenfor komplekse interventioner findes der forsat kun få detaljerede beskrivelser af interventionerne.

**Formål:** At evaluere udfordringer og læring i arbejdet med at beskrive en kompleks rehabiliteringsintervention til patienter med lænderygsmærter før afprøvning i et randomiseret kontrolleret studie.

**Metode:** "Template for Intervention Description and Replication" (TIDieR) (1) blev brugt som redskab til at sikre en detaljeret beskrivelse af rehabiliteringsinterventionen.

**Evaluering:** TIDieR er et let anvendeligt redskab til at strukturere den detaljerede beskrivelse af en rehabiliteringsintervention. Dog var det en udfordring at beskrive de 38 kliniske aktiviteter i rehabiliteringsinterventionen på en overskuelig måde. Vi udviklede derfor et aktivitetsskema med fire udvalgte elementer fra TIDieR (Hvad (procedurer), Hvem, Hvordan og hvornår samt Hvor meget). Aktivitetsskemaet giver et overskueligt overblik over hver af de 38 kliniske aktiviteter. Vores detaljerede beskrivelse anvendes nu med succes til at strukturere og standardisere indholdet i en kompleks rehabiliteringsintervention til patienter med lænderygsmærter i et randomiseret kontrolleret studie. Det er vores håb at aktivitetsskemaet kan hjælpe og inspirere både forskere der skal beskrive en kompleks intervention og fysioterapeuter i klinisk praksis.

### Reference:

(1) Hoffmann TC et al. "Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide"; BMJ; 2014

**Kort foredrag, fredag 10.10-10.25, lokale 24**

## Kan fysioterapijournaler fra kroniske lænderyg patienter anvendes til at vurdere klinisk relevant effekt?

Anne Katrine Skjølstrup Toftdahl (1), TS Palsson (2)

1) University College of Northern Denmark, Aalborg, Denmark

2) Aalborg University, Center for Sensory-Motor Interaction Dept. of Health Science and Technology, Aalborg, Denmark

**Baggrund:** Lænderygsmarter er den største muskuloskeletale udfordring for den danske økonomi og befolkning. Der forligger både nationale og internationale fysioterapeutiske kliniske retningslinjer på området, men til trods for det, er lænderygsmarter fortsat et omfattende problem. Der er i stigende grad fokus på, at forbedre genanvendelsespotentialet i journaldata. For at indfri denne ambition kræves der data af høj kvalitet; hvilket betyder at data/dokumentation skal være præcise, fyldestgørende, systematiske og konsekvente registreret. Dette projekt undersøgte hvorvidt journaldata kunne genanvendes til at belyse en klinisk relevant behandlingseffekt, i overensstemmelse med gældende anbefalinger. Projektet omhandlede borgere med lænderygsmarter efter et fysioterapeutisk genoptræningsforløb.

**Metode:** Det anvendte studiedesign er et forklarende sekventielt mixed-methods design. Et registerudtræk på journaldata i en genoptræningsenhed i Nordjylland under gik en deskriptiv statistisk analyse. Journaldata, blev sammenholdt med IMMPACT retningslinjer, som blev udvalgt på baggrund af en litteratur gennemgang. IMMPACT retningslinjerne har til formål at definere relevante effektmål i smerteforskning.

**Resultater:** Datakvaliteten i det indsamlede data levede ikke op til IMMPACT-retningslinjerne i forhold til vurdering af smerter, fysisk- og emotionel funktion samt patientrapporteret effekt. Der blev ikke anvendt standardiserede effektmål for ændringer i emotionel funktion eller på patient rapporteret effekt. Effektvurderinger af smerter og fysisk funktion kunne på baggrund af data kategoriseres til 'værre'; 'bedre'; 'ingen effekt' og 'ikke registreret', dette skyldtes en usystematisk anvendelse af effektmål for smerter og fysisk funktion. Ud fra denne kategorisering repræsenteredes data sig som 'ikke registreret' i 50 % af journalerne for effektmålet smerte og i 52 % af journalerne for effektmålet fysisk funktion. De undersøgte journaldata var derfor ikke præcise, fyldestgørende, systematiske eller konsekvente, hvorfor de ikke kunne anvendes til vurdere om effekten var klinisk relevant.

**Konklusion:** For at opfylde kravene om at levere journaldata af høj kvalitet for derved kunne vurdere klinisk relevante behandlingseffekter, er det afgørende, at fysioterapeuten følg-

er de retningslinjer som er på området. Data bør ligeledes være let tilgængelige i journalerne samt præcist, fyldestgørende, systematisk og konsekvent dokumenteret og afspejle praksis. En gennemgang af litteraturen kan definere, hvilke effektmål som er relevante både i forsknings- og kvalitetssikringsammenhænge, og som samtidig lever op til gældende kliniske retningslinjer.

**Kort foredrag, fredag 10.25-11.40, lokale 24**

## “Keep it simple”: patient involvement in developing a patient reported outcome instrument for patient with lumbar radiculopathy

Charlotte Ibsen (1,2,3), B Schiøttz-Christensen (3,4), CV Nielsen (1,2), M Hørder (5), T Maribo (1,2), C Handberg (1,2)

1) DEFACTUM, Koncern Kvalitet, Region Midtjylland,

Aarhus, Danmark

2) Aarhus Universitet, Institut for Folkesundhed,

Aarhus, Danmark

3) Rygcenter Syddanmark, Sygehus Lillebælt,

Middelfart, Danmark

4) SDU, Institut for Regional Sundhedsforskning,

Odense, Danmark

5) SDU, Institut for Sundhedstjenesteforskning,

Odense, Danmark

**Background:** Assessing functioning in patients with lumbar radiculopathy is multifaceted and a biopsychosocial approach with involvement of patients in the clinical decision-making process is recommended. Patient-reported outcomes (PROs) are expected to play an important role in patient-centered health care.

**Purpose:** To involve patients with lumbar radiculopathy in the development of a PRO-instrument based on the biopsychosocial perspective, by exploring patients' perspectives on the instrument's ability to describe functioning and provide information for the clinical decision-making process.

**Methods:** Two semi-structured focus group interviews were conducted using The International Classification of Functioning, Disability and Health (ICF) as theoretical framework. Before the interviews the participants completed a draft of the PRO-instrument online. During the interviews the patients were asked to comment on the PRO-instrument and to acknowledge pros, cons and possible death



within the PRO-instrument. All interviews were recorded and transcribed before the analysis.

**Results:** Seven patients with lumbar radiculopathy participated in the focus group interviews. The findings represented an understanding of the patients perspectives on the PRO-instruments ability to describe functioning and provide information for the clinical decision making process. The findings revealed three core themes. While Simplicity signified that the patients wanted to keep the items to a minimum and to avoid overlapping items; Individuality was based in the patients wish to individualize their answers to some degree in order for them to describe their specific functioning. Application related to the patients' desire for their provided information to be used to improve their treatment and the assessment of their functioning.

**Conclusion:** The study provided important insight into engaging patients in development of a PRO-instrument by involving the patients and their perspective in clinical decision making. The patients expressed that to attain a patient centered clinical consultation with use of PRO-data, the PRO-instrument must be simple and allow for individuality and the PRO-data had to be applied actively by the clinician during consultation.

**Kort foredrag, fredag 10.40-10.55, lokale 24**

## Development of a patient-reported outcome instrument for patients with lumbar radiculopathy

*Charlotte Ibsen (1,2,3), B Schiøttz-Christensen (3,4),*

*CV Nielsen (1,2), M Hørder (5), T Maribo (1,2)*

*1) DEFACTUM, Region Midtjylland, Aarhus, Danmark*

*2) Aarhus Universitet, Institut for Folkesundhed, Aarhus, Danmark*

*3) Rygcenter Syddanmark, Sygehus Lillebælt, Middelfart, Danmark*

*4) Syddansk Universitet, Institut for Regional Sundhedsforskning, Odense, Danmark*

*5) Syddansk Universitet, Institut for Sundhedstjenesteforskning, Enhed for Brugerperspektiver, Odense, Danmark*

**Background:** Assessing functioning in patients with lumbar radiculopathy is multifaceted. Therefore a biopsychosocial approach with involvement of patients in clinical

decision-making is recommended. The International Classification of Functioning, Disability and Health (ICF) offers a framework for applying the biopsychosocial model to clinical practice. Patient-reported outcomes (PROs) play an important role in patient-centered health care.

**Objective:** To develop and test a PRO-instrument, based on a biopsychosocial approach, in order to qualify the assessment of functioning in patients with lumbar radiculopathy, and increase patient involvement in clinical decision-making.

**Methods:** The scientific fundament is the ICF Core Set for Low Back Pain. The development process contains of seven phases:

1. Identify content corresponding to ICF categories in the core set and formulate items using The Patient-Reported Outcomes Measurement Information System (PROMIS®) methods and terminology as a starting point
2. Piloting an early draft (n=3)
3. Focus group interviews with patients (n=16) and health professionals (n=8) to get their perspective on the content
4. Meetings with physiotherapists to qualify the content
5. Final piloting (n=15)
6. Alpha testing (n=2) including using the PRO-data in the clinical consultation and final adjustments
7. Training physiotherapist to actively use the PRO-data in the clinical consultation (n=9).

To evaluate whether the PRO-instrument increases patient involvement in clinical decision-making a quasi-experimental study among the target population will be performed. The primary outcome is active patient involvement in clinical decision-making.

**Results:** Out of 81 ICF categories 65 were identified to be included in the PRO-instrument. The PRO-instrument contains 83 items addressing body function, activity, participation and environmental factors. The PRO-instrument has been alpha tested with good results and physiotherapists have been trained. Next step is to test the PRO-instrument in a Spine Centre among the target population (n=250).

**Conclusions:** This study introduces a PRO-instrument based on a biopsychosocial approach to qualify the description of functioning among patients with lumbar radiculopathy. Further this study will provide important insight into the use of patients' perspective in clinical decision-making.

**Kort foredrag, fredag 10.55-11.10, lokale 24**

## Motorisk påvirkning før og efter operation hos patienter med lumbal diskusprolaps

*Lisbeth Storm, SB Andersen, MØ Andersen*  
Rygkirurgisk Sektor, Rygcenter Syddanmark,  
Sygehus Lillebælt, Middelfart, Danmark

**Baggrund:** I Rygkirurgisk Sektor, Rygcenter Syddanmark, opereres 400-500 patienter årligt for lumbal diskusprolaps. Præoperativ nedsat kraft over hofter, knæ eller fod anses, i svære tilfælde, for at være en af indikationerne for et rygkirurgisk indgreb. Forekomsten af præoperativ motorisk påvirkning, prognosen og risikoen for nytillkommet motorisk påvirkning efter operationen er uvis. Fysioterapeuter har siden oktober 2010 varetaget postoperative kontroller og har indsamlet data om neurologisk påvirkning. En analyse af disse data vil føre til øget viden på området og dermed give et bedre grundlag for at informere patienterne om, hvad de kan forvente sig af en operation.

### Formål:

- At undersøge forekomsten af præoperativ samt nytillkommet postoperativ motorisk påvirkning i forbindelse med operation for lumbal diskusprolaps.
- At undersøge eventuel ændring i motorisk påvirkning 4-6 uger postoperativt.

**Metode:** Data om motorisk påvirkning, hos patienter opereret for lumbal diskusprolaps, blev indsamlet i perioden 01.10.2010 til 13.09.2017. Vurdering af påvirkning blev foretaget af fysioterapeuter i forbindelse med kontrolbesøg 4-6 uger postoperativt. Aktuell påvirkning blev vurderet ud fra en objektiv undersøgelse. Præoperativ påvirkning blev vurderet ud fra tidligere journal notater eller, ved manglende journal notat, ud fra patientens udsagn.

Data om forekomst af samt ændring i motorisk påvirkning, blev opgjort i en simpel deskriptiv analyse. Hertil blev anvendt Excel.

**Resultater:** I den givne periode blev 2488 patienter opereret for lumbal diskusprolaps. Der var manglende data på 55 patienter. Således indgik 2435 i analysen. I alt 1161 patienter havde ikke præoperativ motorisk påvirkning (47,3 %). Hos 45 patienter blev rapporteret om nytillkommet postoperativ motorisk påvirkning (3,9 %).

Ud af de 2435 patienter havde 1274 motorisk påvirkning præoperativt (52,3 %). De 495 heraf opnåede fuld bedring (38,9 %), 425 opnåede delvis bedring (33,4 %) og 44 fik forværring (3,4 %).

**Konklusion:** Denne undersøgelse viser, at over halvdelen af de patienter, der opereres for lumbal diskusprolaps, har

præoperativ motorisk påvirkning. Næsten ¾ af patienterne opnår hel eller delvis bedring 4-6 uger postoperativt. Patienter, der ikke præoperativt har motorisk påvirkning, vil have en lille risiko for udvikling af varierende grad af nedsat kraft. Desuden er der risiko for forværring af en allerede eksisterende påvirkning.

**Kort foredrag, fredag 11.10-11.25, lokale 24**

## Supervised pelvic floor muscle training versus attention-control massage treatment in patients with faecal incontinence: a randomised controlled trial

*Anja Ussing (1,2), I Dahn (3), U Due (4,5), M Sørensen (3), J Petersen (2), T Bandholm (1,2,6)*

1) Department of Physiotherapy and Occupational Therapy, Copenhagen University Hospital, Hvidovre, Denmark

2) Optimed, Clinical Research Center, Copenhagen University Hospital, Hvidovre, Denmark

3) Department of Surgical and Medical Gastroenterology, Copenhagen University Hospital, Hvidovre, Denmark

4) Department of Occupational and Physical Therapy, Herlev Hospital, Herlev, Denmark

5) Department of Obstetrics and Gynaecology, Herlev Hospital, Herlev, Denmark

6) Physical Medicine & Rehabilitation Research - Copenhagen (PMR-C), Copenhagen University Hospital, Hvidovre, Denmark

**Background:** Faecal incontinence can have a devastating impact on quality of life and lead to major limitations in daily life. Pelvic floor muscle training (PFMT) in combination with conservative treatment is recommended as first-line treatment for faecal incontinence. Despite this, the effect of PFMT for faecal incontinence is unclear.

**Aim:** To investigate if 16 weeks of supervised PFMT in combination with conservative treatment was superior to attention-control massage treatment and conservative treatment in patients with faecal incontinence.

**Design:** A randomised, controlled, superiority trial.

**Methods:** 98 Patients with faecal incontinence were randomised to either (1) supervised PFMT and conservative treatment or (2) attention-control massage treatment and

conservative treatment. The primary outcome was participants' rating of symptoms changes after 16 weeks of treatment using the Patient Global Impression of Improvement Scale (PGI-I). Supportive secondary outcomes were the Vaizey Incontinence Score (Vaizey), the Fecal Incontinence Severity Index (FISI) and the Fecal Incontinence Quality of Life Scale (FIQL). All outcome assessors were blinded.

**Results:** After 16 weeks of treatment, the PFMT group were significantly more likely to report improvement of their incontinence symptoms at the PGI-I, unadjusted odds ratio 5.16, 95% CI [2.18,12.19],  $p = 0.0002$ . The PFMT group had a significantly larger reduction in severity at the Vaizey Score, the unadjusted mean difference between groups being -1.83 point, 95% CI [-3.57,-0.08],  $p = 0.04$ . The FISI showed a tendency towards larger reduction in severity in the PFMT group, but this was not significant. There were no significant differences in condition-specific quality of life. In per-protocol analyses the superiority of PFMT were more pronounced. The effect at the primary outcome and the improvement of the incontinence scores was increased and the training group now had a significantly larger reduction at the FISI, the adjusted mean difference between groups being -6.74 point, 95% CI [-12.84,-0.65],  $p = 0.03$ .

**Conclusion:** This trial provides support for a superior effect of supervised PFMT in combination with conservative treatment compared to attention-control massage treatment and conservative treatment in patients with faecal incontinence.

**Keywords:** Faecal Incontinence, Supervised Pelvic Floor Muscle Training, Randomised Controlled Trial, Attention-control Treatment, Conservative Treatment

**Reference:**

ClinicalTrials.gov-Identifier: NCT01705535.

**Kort foredrag, fredag 9.55-11.10, lokale 26**

## Health care students' attitudes towards addressing sexual health – psychometric results of the Danish version

*Helle Gerbild (1,2), CM Larsen (1,3), B Rolander (4,5), K Areskoug-Josefsson (6)*

*1) Health Science Research Center, University College Lillebælt, Odense M, Denmark*

*2) Department of Public Health, General Practice, Odense C, Denmark*

*3) Department of Sports Science and Clinical Biomechanics, Odense M, Denmark*

*4) Futurum, Academy for Health and Care, Jönköping, Sweden*

*5) Department of Behavioural Science and Social Work, School of Health Science, Jönköping, Sweden*

*6) School of Health and Welfare, Jönköping Academy for Improvement of Health and Welfare, Jönköping Universitet, Jönköping, Sweden*

**Background:** Students' attitudes and educational needs regarding sexual health are important, since their ability to promote sexual health in their future profession can be challenged by their attitudes and knowledge of sexuality and sexual health. As there were no existing Danish instruments to measure students' attitudes towards working with and communicating about sexual health, we decided to use the Swedish questionnaire Students' Attitudes Towards Addressing Sexual Health (SA-SH) in a Danish context, and to be able to use it, we designed a project with the following aim.

**Aim:** The aim of the project was to translate and psychometrically test the Danish version of the SA-SH.

**Methods:** Translation and psychometric testing of a Danish version of the SA-SH included testing of internal consistency reliability, content validity, construct validity, and analyses of floor and ceiling effects.

**Results:** The Danish version of the SA-SH (SA-SH-D) had a Cronbach's alpha of 0.67, showing good reliability. The content validity index showed high relevance (item context validity index 0.82-1.0), and the item scale correlation was satisfactory.

**Conclusion:** The Danish version of Students' Attitudes Towards Addressing Sexual Health (SA-SH-D) is a valid and reliable questionnaire, which can be used to measure health care professional students' attitudes towards working with sexual health in their future profession.

**Perspective:** It is recommended to use the SA-SH-D in sexual health course evaluations and in intervention studies for Danish health care students.

**Reference:**

GERBILD, H., LARSEN, C., ROLANDER, B. and ARESKOUG JOSEFSSON, K., 2017. Health Care Students' Attitudes Towards Addressing Sexual Health in Their Future Professional Work: Psychometrics of the Danish version of the Students' Attitudes Towards Addressing Sexual Health Scale. *Sexuality & Disability*, 35(1), pp. 73-87.

**Kort foredrag, fredag 10.10-10.25, lokale 26**

## Impaired cerebral autoregulation during head up tilt in patients with severe brain injury

*Christian Riberholt (1), N Olesen (2,3), M Thing (4), C Juhl (5,6), J Mehlsen (7), T Petersen (1)*

1) Research Unit on Brain Injury Neuro Rehabilitation Copenhagen, Department of Neurorehabilitation/TBI Unit, Rigshospitalet, Copenhagen, Denmark

2) Department of Anaesthesia, Rigshospitalet, Copenhagen, Denmark

3) Department of Neuroscience and Pharmacology, University of Copenhagen, Copenhagen, Denmark

4) Department of Paediatrics, Copenhagen University, Hospital Hvidovre, Hvidovre, Denmark

5) Research Unit for Musculoskeletal Function and Physiotherapy, Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

6) Department of Rehabilitation, Copenhagen University Hospital Herlev and Gentofte, Gentofte, Denmark

7) Syncope Centre, Department of Cardiology, Bispebjerg & Frederiksberg Hospital, University of Copenhagen, Frederiksberg, Denmark

**Background:** Mobilisation has been used for improving long-term outcome for patients after severe acquired brain injury. Patients with low level of consciousness are often mobilised using a tilt table. The head-up tilt mobilisation is limited by the occurrence of orthostatic intolerance which shortens the intensity and leaves the patients with unstimulating bed rest. In the present study cerebral autoregulation was examined in patients with severe acquired brain injury and low level of consciousness.

**Methods:** Fourteen patients with severe acquired brain injury, low level of consciousness and orthostatic intolerance and fifteen healthy volunteers were enrolled. Blood pressure was evaluated by pulse contour analysis, heart rate and RR-intervals were determined by electrocardiography, middle cerebral artery velocity was evaluated by transcranial Doppler, and near-infrared spectroscopy determined frontal lobe oxygenation in the supine position and during head-up tilt. Cerebral autoregulation was evaluated as the mean flow index calculated as the ratio between middle cerebral artery mean velocity and estimated cerebral perfusion pressure.

**Results:** Patients with acquired brain injury presented with an increase in mean flow index during head-up tilt indicating impaired cerebral autoregulation ( $P < 0.001$ ) more than one month after the initial brain injury. Spectral analysis of heart rate variability in the frequency domain revealed lower magnitudes of ~0.1 Hz spectral power in patients compared to healthy controls suggesting baroreflex dysfunction.

**Conclusion:** Patients with severe acquired brain injury, low level of consciousness and orthostatic intolerance have impaired cerebral autoregulation during head-up tilt conducted more than one month after brain injury.

**Kort foredrag, fredag 10.25-11.40, lokale 26**

## Modificeret "Functional Reach" test er reliabel til hospitalsindlagte patienter med apopleksi

*Katrine Lyders Johansen (1), MM Garborg (1), S Wildenskov (1), A Vinther (1,2)*

1) Afdeling for Ergoterapi og Fysioterapi. Herlev og Gentofte Hospital, Herlev, Danmark

2) Patientforløb og Organisation. Herlev og Gentofte Hospital, Herlev og Gentofte, Danmark

**Baggrund:** Fokus i genoptræning hos moderat til svært ramte patienter med apopleksi er oftest på den siddende balance med rækkeøvelser, som udfordrer balancen. Der er behov for måleredskaber, som kan opfange små ændringer fx en øget rækkeafstand og som er lette at anvende i klinikken. Måleredskabet "Functional Reach" modificeret med patienten i siddende udgangsstilling (mFRT) fremfor stående er et muligt redskab til evaluering af dette målt ud fra en ændring i rækkeafstanden.

**Formål:** At undersøge den relative og absolutte reliabilitet af mFRT til hospitalsindlagte patienter med apopleksi.

**Design:** Intertester reliabilitetsstudie.

**Materiale og Metode:** 54 patienter (mænd, n=34) i alderen 36-92 år blev testet på første til 19. dage efter debut med en median på 4 dage. Patienterne blev testet samme dag af to uafhængige testere. Patienterne udførte to testsessioner (3 testforsøg) med hver tester med en times pause imellem. I projektet indgik der ialt 5 testere.

Relativ reliabilitet blev beregnet med Intraclass correlation coefficient (ICC1,1) og den absolute reliabilitet blev beregnet som Standard Error of Measurement med 95 % CI (SEM95) og Smallest Real Difference (SRD).

**Resultater:** ICC-værdierne var 0.95 (95% CI 0.91-0.97) i første testsession og 0.96 (95% CI 0.93-0.98) i anden testsession.

SEM95 varierede fra 5.7cm i første testsession til 5.1cm i anden testsession og SRD varierede fra 8.0cm i første testsession til 7.2cm i anden testsession.

**Konklusion:** Den relative reliabilitet var høj i begge testsessioner med ICC-værdier over 0.9. Den absolute reliabilitet viser, at for at der er tale om en reel forandring, skal patienterne forandre sig mere end 5.7cm på gruppeniveau og mere end 8cm på individniveau.

En individuel måleusikkerhed på 8 cm vurderes at være stor på et akut apopleksiafsnit, hvorfor mFRT bør anvendes på tværs af sektorer til de moderat til svært ramte patienter med nedsat siddende balance.

**Kort foredrag, fredag 10.40-10.55, lokale 26**

## Succesfuld implementering af klinisk retningslinje for fysioterapi til patienter med amyotrofisk lateral sklerose på danske hospitaler

Signe Versterre (1), L Buus (2), H Lund (3)

1) Rigshospitalet, Glostrup, Danmark

2) Nordsjællandshospital, Hillerød, Danmark

3) Centre for Evidence-based Practice, Western Norway University of Applied Sciences, Bergen, Norway

**Baggrund:** Kliniske retningslinjer kan bygge bro mellem forskning og praksis, hvis de er vel implementerede. En national klinisk retningslinje (NKR) for fysioterapi til patient-

er med ALS blev udarbejdet med involvering af ALS-fysioterapeuter, ALS-patienter og patientforeningen. Den nationale kliniske retningslinje er systematisk udviklet, reviewet og publiceret hos Clearinghouse i april 2014. Før publicering blev udkastet testet i praksis af ALS-fysioterapeuterne og kvalificeret af tre ALS-patienter.

Den nationale kliniske retningslinje giver 16 anbefalinger omkring tre områder indenfor fysioterapi: træning, mobilitet og respirationsfysioterapi. Anbefalingerne er svage i forhold til evidens, men indeholder vigtig viden for at kunne vejlede patienten i behandlingsforløbet.

**Formål:** at beskrive en tilpasset implementeringsstrategi og evaluere fysioterapeuters brug af NKR for Fysioterapi til Patienter med ALS, på danske hospitaler med ALS-team.

**Metode:** ti hospitaler med ALS-team kunne inkluderes i implementeringsprocessen og i en national tværsnitsundersøgelse. Knowledge to Action modellen blev benyttet som rammeværk. Her indtænkes implementering helt fra udviklingen af en NKR. I praksis inkluderede det tiltag som involvering af end-users (ALS-fysioterapeuter, patienter, patientforening), sikring af økonomiske forhold vedrørende udvikling af NKR samt implementering, målrettet undervisning i mindre grupper og opfølgning ved audit og feedback.

Retrospektiv journalaudit blev gennemført på indlagte/ambulante patienter med ALS på de hospitaler i Danmark med ALS-team. Fysioterapeutisk praksis blev af to uafhængige fysioterapeuter ud fra journalnotater registreret som værende i overensstemmelse med NKR eller ikke, via en proces indikator.

**Resultater:** Ti hospitaler deltog i implementeringsprocessen. Otte hospitaler deltog i tværsnitsstudiet. 86 patient journaler blev inkluderet i den nationale audit. Indikatoren fandt, at NKR blev brugt i 98% af patientkontakterne. Notaterne afspejlede ti af de 16 anbefalinger, heraf blev fire anvendt hyppigere end de andre. Der blev afvejet fra anbefaling 2 (anvendelse af hjælpemidler) og 13 (sekretmobilisering) uden begrundelse herfor.

**Konklusion:** NKR for fysioterapi til patienter med ALS anvendes i vid udstrækning på hospitaler med ALS-team ifølge dokumentation i patientjournalerne. Indikatoren der blev brugt ved audit var bred. Mere specifikke indikatorer, så som en klinisk ræsonneringsalgoritme kunne øge kvaliteten af audit.

**Kort foredrag, fredag 10.55-11.10, lokale 26**

## Reliability of the Six Spot Step Test in persons with multiple sclerosis

*J Callesen (1), Christina Richter (2), IL Sunesen (2), CL Kristensen (2), MC Næsby (3), AG Skjerbæk (3), U Dalgas (1)*

1) Institut for Folkesundhed - Sektion for Idræt, Aarhus, Danmark

2) VIA University College Campus N, Aarhus, Danmark

3) Sclerose Hospitalet i Danmark, Ry, Danmark

**Introduction:** The Six Spot Step Test (SSST) is a complex measure of gait function developed to test persons with multiple sclerosis (PwMS). In addition to fast walking, it also encompasses acceleration, dynamic balance, lower limb strength, and coordination. Despite increasing use in clinical practice and research, no studies have so far investigated the within-day and day-to-day variability.

**Purpose:** This study investigated the reliability in repeated measures of the SSST test within and between days in PwMS. A secondary aim was to investigate the validity of handheld timing.

**Method:** 38 Multiple Sclerosis-inpatients, with an Expanded Disability Status Scale (EDSS) <6.5, age 31-76 years, underwent a SSST and 5 min. later a re-test. This procedure was repeated two days later under the same conditions. Time was measured by use of a handheld stopwatch. Bland-Altman analyses were used to estimate relative and absolute 95% Limits of Agreement (LOA). Sub-analyses with stratification for assistive devices were conducted. In a subgroup of 18 PwMS, the SSST's were video-recorded and timed by a second investigator in order to determine the validity and the reliability of the handheld timing.

**Results:** Day-to-day and between-day agreements relative to the test time were  $\pm 15\%$  and  $\pm 19\%$  respectively (n=38). Variation in repeated measures tended to increase as test time increased. A decrease in mean time of 6% was found over four tests.

Moreover, participants that used a rollator tended to walk slower. An absolute LOA between days in subjects that walked either without assistive devices or with canes was  $\pm 2.0$  sec. (n=31). A timing error of  $\pm 0.5$ sec was observed when applying handheld timing as compared to video-based timing.

**Conclusion:** The SSST test has an acceptable within- and day-to-day reliability, despite a potential minor learning effect. For interventional purposes a change of >19% (or 2 sec.) between days can be considered a threshold that reli-

ably indicates a true change in SSST performance in PwMS. Valid timing can be performed by a handheld stopwatch.

**Kort foredrag, fredag 11.10-11.25, lokale 26**

## Comparison of 4 outcome measures used for assessment of functional outcome in patients with a hip fracture during acute hospitalization

*Signe Hulsbæk (1,2), RF Larsen (1), MT Kristensen (2)*

1) Department of Occupational and Physical Therapy, Zealand University Hospital, Køge, Denmark

2) Physical Medicine and Rehabilitation Research

- Copenhagen (PMR-C) Departments of Physical Therapy and Orthopedic Surgery, Copenhagen University Hospital, Hvidovre, Denmark

**Introduction:** An increasing number of settings organize their treatment of acute hip fracture (HF) patients in orthogeriatric or geriatric units. This means that e.g. data of functional capacity of HF patients is reported to the Danish hip fracture database using the Cumulated Ambulation Score (CAS), but also to the corresponding Danish database of geriatrics using Barthel-100 and 30-s Chair-Stand-Test (CST). Recently the de Morton Mobility Index (DEMMI) was added to the geriatric database and thereby also used for patients with acute HF, although not validated in that context. The aim of this study was to examine the validity of DEMMI in patients with a HF in comparison with Barthel-100, CST and CAS.

**Methods:** Data of 273 consecutive patients with a HF admitted to a Geriatric Department following surgery were collected. Patients were operated from October 2014 until August 2015. 51 patients were excluded (main reasons for exclusion were: Transfer to other departments, no ability to walk prior to fracture and dead), leaving 222 patients (57 from nursing homes) for analysis. Patients were assessed with the 4 measurements on post-surgery day 1 and at discharge.

**Results:** 98% and 89% of patients were not able to perform the CST at baseline and at discharge (large floor effect), respectively. Corresponding floor effects were 39% and 31% for DEMMI, 12% and 5% for Barthel-100, and 22% and 6%, respectively for CAS. Convergent validity was strong between DEMMI and CAS ( $r=0.76$ , 95% CI 0.69-0.81), and moderate between DEMMI and Barthel-100 ( $r=0.58$ , 95% CI

0.48-0.66) and CAS and Barthel-100 ( $r=0.49$ , 95% CI 0.39-0.59). Responsiveness, indicated by the Effect Size was 0.76 for DEMMI, 1.78 for Barthel-100 and 1.04 for CAS. Baseline scores of DEMMI, Barthel-100 and CAS showed similar properties in predicting discharge destination of patients from own home.

**Conclusion:** Dealing with 4 outcome measures in short hospital stays is time-consuming for the health-care staff. The value of using DEMMI and CST in patients with HF during the acute hospitalization seems limited in comparison with Barthel-100 and CAS.

**Kort foredrag, fredag 9.55-10.10, Plenum**

## Effectiveness of 6 versus 12 weeks outpatient physiotherapy including progressive strength training commenced shortly after hip fracture: a multicenter RCT

Jan Arnholtz Overgaard (1,2), T Kalleose (3,4), MT Kristensen (1,4,5)

1) Physical Medicine and Rehabilitation Research – Copenhagen (PMR-C), Denmark

2) Department of Rehabilitation, Lolland Municipality, Maribo, Denmark

3) Department of Clinical Research Centre, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark

4) Department of Orthopedic Surgery, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark

5) Department of Physical Therapy, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark

**Introduction:** The latest Cochrane review (1) emphasized the need for RCTs to investigate the timing, duration, and intensity of different physical therapy (PT) interventions in patients with hip fracture (HF). However, such studies have most often been conducted as extended programs following ceased standard PT.

**Purpose:** To examine if 12 weeks of community-based PT with progressive strength training is more effective than 6 weeks in improving walking distance in patients when commenced shortly after discharge from HF surgery.

**Method:** 100 community-dwelling patients with HF were included from 4 outpatient centers at a mean (SD) of 18 (5.9)

days after surgery, and equally randomized in two groups (6 versus 12 weeks), in this assessor blinded study. Both groups received functional, balance, and progressive lower limb strength training exercises, 2 times a week. The primary outcome was change in walking distance in the 6-minute walk test from baseline to the 6 months follow-up.

**Results:** Intention-to-treat analysis showed no significant between-group difference in the primary outcome, versus significant improvements, mean of 3.5 (95%CI: 0.8 to 6.1) seconds for the TUG in favor of the 12-week group. The fractured limb strength deficit % non-fractured was reduced with a mean of 34% in the 12-week group as compared to 24% in the 6-week group. Still, 46% of all patients had not regained their pre-fracture functional level at the 6 months follow-up.

**Conclusion:** 12 weeks of PT with strength training was not more effective than 6 weeks in improving the walking distance in patients with HF, but a significant improvement was seen for the Timed Up & Go test in favor of the 12-week group. Also, the 12-week program seems superior in reducing the fractured limb strength deficit. However, almost half of all patients still experienced functional deficits compared to their pre-fracture level after 6 months. Longer interventions or physical exercise combined with other treatment modalities seem needed to further enhance the recovery of function for patients with hip fracture.

### Reference:

1) Handoll HH, Sherrington C, Mak JC. Interventions for improving mobility after hip fracture surgery in adults. Cochrane Database Syst Rev. 2011; 3: CD001704  
Clinical.trial.gov.identifier NCT01174589

**Kort foredrag, fredag 10.10-10.25, Plenum**

## Performance stability and interrater reliability of the 10-metre Walking Test in older community-dwelling patients with hip fracture

Jan Arnholtz Overgaard (1,2), MT Kristensen (1,3)

1) Physical Medicine and Rehabilitation Research – Copenhagen (PMR-C), Denmark

2) Department of Rehabilitation, Lolland Municipality, Maribo, Denmark

3) Departments of Physical Therapy and Orthopedic Surgery, Copenhagen University Hospital Hvidovre, Hvidovre, Denmark

**Introduction:** The "Watson" Ten-metre Walking Test (10MWT) (1) was recently cross-cultural adapted into Danish, and available from the Danish Physiotherapy Associations web page for outcome measures, but the psychometric properties have not been established in patients with hip fracture (HF). We, therefore, examined the number of trials needed to achieve performance stability and the interrater reliability of the 10MWT in patients with HF that followed rehabilitation in a community health care center.

**Methods:** A consecutive sample of 49 (20 men) patients with HF (mean (SD) age of 76.8 (8.1) years) were assessed at a mean of 43.1 (11.2) days after hip fracture surgery. All participants performed five timed 10MWT trials as fast as safely possible with a standardized four-wheeled rollator with 20-second pauses between each trial. One more session was conducted on the same day, also supervised by a physiotherapist (in a randomized order) with 1-hour rest between the two sessions. The two physiotherapists were blinded to each other's results, until end of the study. Repeated measures ANOVA analysis with Bonferroni correction was used to elucidate performance stability, while the ICC2.1 (absolute agreement, single measure), standard error of measurement (SEM) and minimal detectable change (MDC) was used to examine interrater reliability and measurement error.

**Results:** Performances of participants improved until the third trial. The faster of the first three trials, reaching a mean (SD: range) of 11.0 (3.08: 5.3-18.9) seconds, was significantly ( $P < 0.001$ ) faster than the two slower trials. The ICC2.1, based on the fastest of the first three trials, was 0.90 (95%CI: 0.82-0.94) with no systematic between rater difference ( $P = 0.3$ ), while the SEM and the MDC were 0.09 and 0.25 m/s, respectively. Corresponding SEM% and MDC% was 8.9% and 24.8%, respectively.

**Conclusions:** We suggest that the fastest of three timed trials to be used for the 10 MWT in patients with HF. Excellent

interrater reliability and low measurement noise, especially at the group level, suggest that the 10MWT can be used to monitor changes in walking speed for patients with HF.

### Reference:

1. Watson MJ (2002). Refining the Ten-metre Walking Test for Use with Neurologically Impaired People. *J Physiotherapy* 2012.

### Kort foredrag, fredag 10.25-10.40, Plenum

## DEMMI as an indicator for rehospitalisation in acute geriatric patients

Dorte Melgaard (1), MM Mørck (1), M Rodrigo-Domingo (2), S Byrgesen (1)

1) Regionshospitalet Nordjylland, Hjørring, Danmark

2) Aalborg Universitetshospital, Aalborg, Danmark

**Background:** A low level of mobility is an important manifestation of illness in older people and a strong prognostic factor of declining health in geriatric patients. The De Morton Mobility Index (DEMMI) is developed to identify early signs of physical decline, assist with goal setting and monitor recovery and, of course, prompt early intervention. DEMMI is reported to the National Danish Geriatric Database. The aim of this study is to assess the mobility in acute geriatric patients and characterize those rehospitalised within 30 days of discharge.

**Methods:** A cross-sectional observational study with longitudinal follow-up was conducted in the period from March 1, 2016 to August 31, 2016. Patients over 60 years of age hospitalized in the Department of Geriatric Medicine at the North Denmark Regional Hospital for at least 24 hours were tested with DEMMI.

**Results:** From a total of 418 patients in the study period, 246 patients (59%) participated (44% male, median age 83 years (70; 94)). The mean DEMMI score was 40. We divided the participants into two groups: DEMMI score  $\leq 40$  and DEMMI score  $> 40$ . The two groups were statistically significantly different according to Barthel100 ( $P > 0.001$ ), Chair stand test ( $P > 0.001$ ), admission time ( $P > 0.001$ ) and discharge to nursing home ( $P > 0.001$ ). We found no significant differences regarding age, gender, comorbidity, hand strength, BMI, or use of mobility aid. DEMMI scores were



low ( $\leq 40$ ) for 67% of the patients hospitalized due to dehydration and for 82% of the patients hospitalized due to reduction in food intake but we did not find a similar pattern in DEMMI scores for patients hospitalised with pneumonia, dyspnea, infections or pain.

The rehospitalisation rate within 30 days for the group of patients with a DEMMI score  $\leq 40$  was 20% versus 23% for the group of patients with a DEMMI score  $> 40$ .

**Conclusion:** There is a relationship between low/high DEMMI score and Barthel-100 score, chair stand test, admission time, and discharge to nursing home. We found no significant association between low/high DEMMI score and rehospitalisation.

**Kort foredrag, fredag 10.40-10.55, Plenum**

## Effect of extended scope physiotherapists assessments in orthopaedic diagnostic setting: a systematic review

Jeanette Trøstrup (1), C Juhl (2,3), LR Mikkelsen (1)

1) Regionshospitalet Silkeborg, Silkeborg, Danmark

2) Forskningsenheden for Muskuloskeletal Funktion og Fysioterapi (FoF), Institut for Idræt og Biomekanik, Odense, Danmark

3) Herlev og Gentofte Hospital, Hellerup, Danmark

**Introduction:** Patients with musculoskeletal diseases referred to an outpatient orthopaedic clinic can potentially be assessed by an extended scope physiotherapist (ESP) instead of an orthopaedic surgeon (OS).

**Objectives:** To evaluate the diagnostic accuracy, cost and patient satisfaction of the musculoskeletal assessment performed by ESP compared to OS.

**Methods:** MEDLINE, Cochrane Central Register of Controlled Trials, EMBASE, CINAHL, PEDro and reference lists of included studies and previous reviews were searched in November 2015.

Studies were included if they 1) evaluated adults with a musculoskeletal disease referred to an outpatient orthopaedic clinic where a diagnostic assessment had been conducted by an ESP and 2) evaluated at least one of these outcomes: diagnostic agreement, costs, satisfaction, wait time and relevant referrals.

Data were extracted using a customised data extraction

sheet. Two reviewers independently evaluated the methodological quality using checklists, and classified risk of bias in high, moderate and low.

**Results:** We included one randomised controlled trial and 31 observational studies. Diagnostic agreement between ESPs and OSs ranged from 65 to 100% across studies. Health care cost savings for diagnostic assessments performed by ESPs were between 27 and 49% compared to OSs. Overall, between 77 and 100% of the patients were satisfied with the ESP assessment.

**Discussion:** Results on diagnostic agreement, cost and satisfaction were comparable in studies with high, moderate and low risk of bias. The main limitation in this study was high risk of bias in the included studies.

**Conclusion and Implication of Key Findings:** Diagnostic assessments performed by ESP may be at least as beneficial than assessment performed by OSs in terms diagnostic agreement, costs and satisfaction. However, the methodological quality of included studies was generally too low to determine the clear effectiveness of ESP assessment, and more high quality studies are needed.

**Funding:** This project was financed with support from Danish Physiotherapist fund for Research.

**Kort foredrag, fredag 10.55-11.10, Plenum**

## Self-efficacy har en væsentlig betydning for fysisk funktion ved hofteartrose

Theresa Bieler (1), T Anderson (1), N Beyer (2), S Rosthøj (3)

1) Fysio- og Ergoterapiafdelingen, Bispebjerg og Frederiksberg Hospital, København, Danmark

2) Institut for Klinisk Medicin, Københavns Universitet, København, Danmark

3) Biostatistisk Afdeling, Institut for Folkesundhedsvidenskab, Københavns Universitet, København, Danmark

**Baggrund:** Hofteartrose er karakteriseret ved smerte under fysisk aktivitet og på verdensplan en væsentlig årsag til funktionsnedsættelse. Ifølge adfærdsteoretiske forklaringsmodeller for funktionsnedsættelse vil personer med artrose undgå fysisk aktivitet af frygt for øget smerte eller

vævsskade, hvilket på lang sigt fører til muskelsvækkelse og derigennem funktionsnedsættelse. Andre faktorer som eksempelvis self-efficacy (individets tiltro til egne evner i forhold til en bestemt adfærd) spiller muligvis også en rolle i denne proces.

**Formål:** At undersøge om smerte og self-efficacy har betydning for fysisk aktivitetsniveau, muskelfunktion og fysisk funktion hos personer med hofteartrose, som ikke står på venteliste til hoftealloplastikoperation.

**Metoder:** Et tværnsnisstudie baseret på baselinedata fra et træningsstudie med 152 personer, der havde klinisk hofteartrose (60-87 år), men ikke stod på venteliste til hoftealloplastikoperation. Smerte under fysisk aktivitet blev målt med smerte-subskalaen i WOMAC-spørgeskemaet (the Western Ontario and McMaster Universities Osteoarthritis Index), self-efficacy blev målt i forbindelse med en trappetest og fysisk aktivitetsniveau med spørgeskemaet PASE (The Physical Activity Scale for the Elderly). Muskelfunktion blev målt som leg extensor power (kraft x hastighed) i en power-rig, mens fysisk funktion blev målt ved 30-sekunders rejse-sætte-sig-test, 6-minutters gangtest og en trappetest. Associationen mellem de forskellige variable blev undersøgt ved en strukturel lignings model, hvor fysisk funktion blev håndteret som en latent variabel.

**Resultater:** I den endelige model er smerte associeret ( $p < 0.001$ ) med self-efficacy. Self-efficacy er endvidere associeret ( $p < 0.001$ ) med fysisk funktion. Af den totale effekt udgør en direkte effekt 76% (95% CI 64-87%),  $p < 0.0001$ . En indirekte effekt via muskelfunktion udgør 21% (95% CI 10-32%),  $p = 0.0001$  og en indirekte effekt via fysisk aktivitetsniveau udgør 3% (95% CI -1 til 8%),  $p = 0.16$ .  $R^2 = 0.68$  indikerer at samlet set forklarer modellen (self-efficacy, fysisk aktivitetsniveau og muskelfunktion) 68% af variationen i fysisk funktion.

**Konklusion:** Self-efficacy har væsentlig betydning for fysisk funktion hos personer med hofteartrose, som ikke står på venteliste til hoftealloplastikoperation. Derfor bør self-efficacy tages i betragtning ved forebyggelse og behandling af funktionsnedsættelse hos disse personer. Effekten af træning kan muligvis øges, når den kombineres med tiltag til at øge self-efficacy.

**Kort foredrag, fredag 11.10-11.25, Plenum**

## Poor replicability of recommended exercise interventions for knee osteoarthritis: a descriptive systematic review of current clinical guidelines and recommendations

*Cecilie Bartholdy (1,3), SM Nielsen (1), S Warming (3), DJ Hunter (2), R Christensen (1), M Henriksen (1,3)*

*1) The Parker Institute, Copenhagen University Hospital Bispebjerg-Frederiksberg, Frederiksberg, Denmark*

*2) Rheumatology Department, Royal North Shore Hospital and Institute of Bone and Joint Research, Kolling Institute, University of Sydney, Sydney, Australia*

*3) Department of Physical and Occupational Therapy, Copenhagen University Hospital Bispebjerg-Frederiksberg, Copenhagen, Denmark*

**Objective:** To examine the completeness of reporting of exercise-based interventions for knee osteoarthritis (OA) in published scientific studies that forms the basis of current clinical guidelines, and examine whether the apparent clinical benefit from exercise is associated with the completeness of intervention reporting.

**Design:** Systematic review of clinical OA guidelines.

**Methods:** We searched MEDLINE and EMBASE for guidelines published between 2006 and 2016 about exercise for patients with knee OA. The studies used to inform a recommendation, were reviewed for reporting completeness using a 12-item checklist that was a combination of the Template for Intervention Description and Replication (TIDieR) and Consensus on Exercise Reporting Template (CERT). Each item was scored 'YES' or 'NO'. Each item was summarized as a proportion of interventions with complete descriptions, and each intervention's completeness was summarized as the percentage of completely described items. Further a stratified analysis according to complete reporting score of each item was carried out. The association between intervention description completeness score for each item and clinical benefits (pain and disability) was analysed with a multilevel meta-regression.

**Results:** From 10 clinical guidelines, we identified 103 original studies of which 100 were retrievable (including 133 interventions with 6,926 patients allocated to exercise) published between 1982 and 2012. No interventions (0%) were completely described on all 12 items (median 33% of items complete; range 17%-75%). Complete descriptions of essential elements of exercise delivery and dose were missing for 97% and 84% of the interventions, respectively. The meta-regression analysis indicated that poorer reporting was associated with apparently greater effects on pain. There was no association with effects on physical function.

**Conclusion:** Inadequate description of recommended interventions for knee OA is a serious problem that precludes replication of effective interventions in clinical practice. By consequence, the relevance and usability of clinical guideline documents and original study reports are diminished. Further, it may cause significant uncertainty and variability among clinicians in clinical practice, which guidelines are supposed to prevent. It is surprising that essential details of exercise interventions are so unclear, yet exercise is unanimously recommended as the treatment of choice for knee OA across international guidelines.

**Kort foredrag, fredag 9.55-10.10, lokale 7-8**

## Tidligere knæskade har betydning for symptombilledet hos patienter med knæartrose

*Pætur Mikal Holm (1,2), E Boyle (2), E Roos (2), ST Skou (1,2)*

1) Fysio- og Ergoterapien, Næstved- Slagelse- Ringsted (NSR) Sygehuse, Region Sjælland, Næstved-Slagelse, Danmark

2) Institut for Idræt og Biomekanik, Syddansk Universitet, Odense, Danmark

**Baggrund:** Symptombilledet hos personer med knæartrose kan variere meget. Ved at identificere forskellige subgrupper af patienter med knæartrose vil klinikerne i højere grad være i stand til at tage højde for individuelle forskelle i undersøgelse og behandling.

**Formål:** Formålet med denne undersøgelse var at kortlægge betydningen af tidligere knæskade for symptomer forbundet med knæartrose.

**Metode:** Dette var en tværsnitsundersøgelse af baseline data på 10.656 personer med knæartrose i GLA:D®-registeret. Personerne blev inddelt i 3 grupper baseret på følgende kriterier: Ingen tidligere knæskade (Gruppe\_1), tidligere knæskade (Gruppe\_2) og tidligere knæskade samt tidligere knækirurgi (Gruppe\_3). Grupperne blev sammenlignet på følgende parametre: Alder, smerteintensitet (VAS, 0-100), symptomvarighed, smerteudbredelse til overkroppen (generaliseret smerte) og forbrug af gigtmedicin (NSAID).

Data blev analyseret vha. Kruskal-Wallis og Pearsons Chi2 og præsenteres som gennemsnit med konfidensintervaller (95% CI).

**Resultater:** Gennemsnitsalderen var hhv. 61 år (60,9 – 61,6) for Gruppe\_3, 65 år (64,5 – 65) for gruppe\_1 og 66 år (65,2 – 65,9) for gruppe\_2. Gruppe\_2 og gruppe\_3 havde større VAS smerter end gruppe\_1 - hhv. 49,5 (48,7 – 50,2) og 49,9 (49,1 – 50,7) vs. 47,8 (47,2 – 48,5). Symptomvarighed var hhv. 35,3 mdr. (33,5 – 37,1) for Gruppe\_1, 52,3 mdr. (49 – 55,6) for gruppe\_2 og 70,9 mdr. (66,9 – 74,9) for gruppe\_3. I gruppe\_2 og gruppe\_3 angav hhv. 46% (44,4 – 48) og 44% (42,5 – 46,2) tegn på generaliseret smerte, hvilket var signifikant flere end i gruppe\_1, hvor 38% (36,6 – 39,3) angav tegn på generaliseret smerte. I gruppe\_3 angav 51% (49,1 – 53,5) at have taget NSAID for knæsmerter indenfor de sidste 3 mdr., hvilket var signifikant flere end i de 2 andre grupper, hvor dette tal var 47% (44,9 – 49,1).

**Konklusion:** Blandt personer med knæproblemer set af fysioterapeut forud for et GLA:D-forløb, var personer med tidligere knæskade yngre, havde flere smerter, længere symptomvarighed, flere tegn på generaliseret smerte og et større forbrug af smertestillende medicin end personer uden tidligere knæskade. Denne undersøgelse bidrager med et fornyet indblik i symptombilledet ved posttraumatisk knæartrose og er et vigtigt led i identifikationen af subgrupper i knæartrose populationen, som kan have særlige behandlingsbehov.

**Kort foredrag, fredag 10.10-10.25, lokale 7-8**

## Exercise-induced pain changes associated with changes in muscle perfusion in knee osteoarthritis: exploratory outcome analyses of a randomized controlled trial

*Elisabeth Bandak (1), M Boesen (1,2), H Bilddal (1), R Riis (1,2,3), L Klokke (1), C Bartholdy (1), J Nybing (2), M Henriksen (1,4)*

1) Copenhagen University Hospital, Bispebjerg and Frederiksberg Hospital, The Parker Institute, Copenhagen, Denmark

2) Copenhagen University Hospital, Bispebjerg and Frederiksberg Hospital, Department of Radiology, Copenhagen, Denmark

3) Zealand University Hospital, Holbaek, Department of Radiology, Holbaek, Denmark

4) Copenhagen University Hospital, Bispebjerg and Frederiksberg, Department of Physical and Occupational Therapy, Copenhagen, Denmark

**Objective:** To explore the effects of exercise on muscle perfusion assessed by dynamic contrast enhanced MRI (DCE-MRI) and the associations between changes in muscle perfusion and changes in pain, physical function and performance in knee osteoarthritis.

**Methods:** Exploratory outcome analyses of a randomized controlled study with per-protocol analyses (ClinicalTrials.gov: NCT01545258) performed at an outpatients clinic at a public hospital in Denmark. We compared 12 weeks' supervised exercise therapy 3 times per week with a no attention control group. The main outcome measures were changes from baseline to week 12 in peri-articular knee muscle perfusion quantified by DCE-MRI, patient-reported pain and function using the Knee Injury and Osteoarthritis Outcome Score (KOOS) questionnaire, knee extensor and flexor muscle strength tests, and the six-minute walking test.

**Results:** Of 60 participants randomized with knee osteoarthritis, 33 (exercise therapy, n=16, control group, n=17) adhered to the protocol and had complete DCE-MRI data. At follow-up, there were significant group differences in changes in muscle perfusion and clinically relevant group differences in KOOS pain changes (-10.6, 95% CI -17.78 to -3.3, P=0.0054) in favor of exercise therapy. The changes in pain and muscle perfusion were significantly correlated (highest Spearman's rho=0.42, P=0.01).

**Conclusion:** The pain-reducing effects of a 12-week exercise program are associated with changes in an objective and novel DCE-MRI-based quantitative measure of muscle perfusion in knee osteoarthritis. This study identifies muscle perfusion as a potential marker of the effects of exercise.

**Kort foredrag, fredag 10.25-10.40, lokale 7-8**

## No exacerbation of knee joint pain and effusion following preoperative progressive resistance training in patients scheduled for total knee arthroplasty

*Birgit Skoffler (1,2), U Dalgas (3), T Maribo (4,5), K Søballe (6), I Mechlenburg (6,7)*

1) Department of Physical and Occupational Therapy, Aarhus University Hospital, Aarhus, Denmark

2) Institute of Clinical Medicine, Aarhus University, Aarhus, Denmark

3) Section for Sport Science, Department of Public Health, Aarhus University, Aarhus, Denmark

4) Section of Social Medicine and Rehabilitation, Department of Public Health, Aarhus University, Aarhus, Denmark

5) DEFACTUM, Central Denmark Region, Aarhus, Denmark

6) Orthopaedic Research Centre, Aarhus University Hospital, Aarhus, Denmark

7) Centre of Research in Rehabilitation (CORIR), Department of Clinical Medicine, Aarhus University Hospital and Aarhus University, Aarhus, Denmark

**Background:** Preoperative progressive resistance training is controversial in patients scheduled for total knee arthroplasty, because of the concern that it may exacerbate knee joint pain and effusion.

**Objective:** To examine if preoperative progressive resistance training initiated 5 weeks prior to total knee arthroplasty would 1) exacerbate pain and knee effusion, 2) allow a progressively increased training load throughout the training period that would subsequently increase muscle strength.

**Methods:** In a randomized controlled trial thirty patients were scheduled for total knee arthroplasty due to osteoarthritis and assigned for the intervention group. Patients underwent unilateral progressive resistance training (3 sessions/week). Exercise loading was 12 repetition maximum (RM) with progression towards 8RM. The training program consisted of 6 exercises performed unilaterally. Before and after each training session, knee joint pain rated on an 11-point scale, effusion assessed by measuring the knee joint circumference, and the applied training load were recorded. The first and last training session were initiated by 1RM testing of unilateral leg press, knee extension and knee flexion.

**Results:** Median difference of knee pain at rest from before to after each training session varied from -1 to 0.5. The average increase in knee joint effusion across the 12 training sessions was 0.16 cm ± 0.23. No consistent increase of knee joint effusion after training sessions during the training period was found (p=.205). Training load generally increased and maximal muscle strength improved; unilateral leg press: 18% ± 30 (p=.03), knee extension: 81% ± 156 (p<.001) and knee flexion: 53% ± 57 (p<.001).

**Conclusion:** Progressive resistance training of the affected leg initiated shortly before total knee arthroplasty does not exacerbate knee joint pain and effusion despite a substantial progression in loading and increased muscle strength.

**Reference:**

ClinicalTrials.gov (NCT01647243).

**Kort foredrag, fredag 10.40-10.55, lokale 7-8**

## Nedsat postoperativ bevægelighed efter total knæalloplastik øger risikoen for brisement

Hanne Hornshøj, T Lind, C Juhl  
Herlev og Gentofte Hospital, Hellerup, Danmark

**Baggrund:** Postoperativ stivhed (utilfredsstillende postoperativ bevægelighed) er en af de hyppigste komplikationer efter total knæ alloplastik (TKA) (Le 2014), og en hyppig årsag til genindlæggelse og revision efter TKA (Manrique 2015)

**Formål:** At undersøge betydningen af pre- og post-operativ bevægelighed (ekstension og fleksion) samt post-operativ smerte i hvile og aktivitet for brisement.

**Design:** Case-Control studie.

**Materiale og metode:** Cases er patienter med TKA pga. artrose, der har modtaget brisement fra 2011-2015 på Gentofte Hospital. Controller op til 4 TKA, der er opereret samme dag og samme sted. Odds-ratio (OR) for brisement med 95% konfidensinterval (95%CI) udregnes. Pre-operativ bevægelighed måles ved indlæggelse til TKA og postoperativt ved udskrivelse. Bevægelighed og smerte dikotomiseres; alder ved 65 år, BMI ved 30 og ROM i fleksion ved 90 og ekstension ved 5 grader. Smerte målt på en NRS-skala dikotomiseres ved 5. Data analyseres med univariate logistisk regressionsanalyse, dernæst multivariate logistiske regressionsanalyse, hvor alle analyser justeres for alder, køn, BMI, operationstype og comorbiditet.

**Resultater:** Der inkluderes 113 cases og 261 controller; 216 kvinder (58%); gennemsnitsalder 65,9 år og BMI 28,8. Odds for brisement er ikke signifikant øget ved pre-operativ nedsat ekstension og flektion (OR=1,39 (95%CI: 0,77; 2,51) og OR=1,95 (0,85; 4,46). Nedsat post-operativ ekstension og flektion øger risiko for brisement (OR=4,36; 95%CI (1,66; 11,44) og OR=2,0 (1,04; 3,85)), justeret for post operativ smerte i hvile og ved aktivitet. Postoperativ smerte i hvile og aktivitet viser ikke signifikant øger risiko for brisement (OR=1,64 (0,58; 4,63) og OR=1,67 (0,93; 3,00)), justeret for postoperativ bevægelighed.

**Konklusion:** Nedsat postoperativ bevægelighed specielt ekstension er en væsentligt selvstændig risikofaktor for brisement

**Nøgleord:** Total knæalloplastik, postoperativ bevægelighed, brisement

**Kort foredrag, fredag 10.55-11.10, lokale 7-8**

## Challenges to establish and support an education in physiotherapy at Zanzibar, Tanzania

Bente Holm, J Christensen, L Kronborg  
Amager og Hvidovre Hospital, Fysio- og Ergoterapeutisk Afdeling, Hvidovre, Danmark

**Background:** Basic physiotherapy services at Zanzibar are minimal. Until 2014 only two physiotherapists were insufficiently covering the treatment of a population of 1.3mio inhabitants. To close this gap, an education in physiotherapy was established at Zanzibar in 2014 through collaboration between the Danish International Development Assistance and Mnazi Mmoja Hospital (MMH), Zanzibar. But how do you unite on developing and sustaining a physiotherapy education program coming from huge intercultural differences in basic systems of politics, education, health, economy, planning and perceptions of disease and body awareness?

**Purpose:** The purpose of this project was to improve and develop physiotherapy services at MMH and to establish a sustainable 3-year education in physiotherapy.

**Methods:** Practical support consisted of continuous on-site support and supervision from interchanging Danish physiotherapists for a 3-year period, using a cultural-adapted mentoring approach regarding assistance to organize the workflow for patient treatment, develop a computer-based patient registration system and clinical guidelines for relevant patient groups, describe curriculum and teaching plans and offer classroom- and clinical-based teaching assistance. Basic materials for hospital and education were provided, and Ministry of Health Zanzibar was approached for agreement on employment of the new future physiotherapists.

**Results:** A plan for physiotherapy services at the MMH was outlined and continuously developed. Clinical guidelines for 8 relevant patient groups were developed and applied in practice at the hospital. Computer-based patient registration was developed and is now successfully administered by local staff.

A curriculum was outlined for a 3-year physiotherapy education program and 21 students enrolled in 2014. Students and teachers have adhered well to the program and 20 of 21 students will graduate in October 2017. Three more groups of students have entered the education since 2014 and local physiotherapists now independently manage teaching requirements according to curriculum. Importantly, Ministry of Health Zanzibar has agreed to open positions for 50 new physiotherapists.

**Conclusion:** The intercultural collaboration to improve

physiotherapy services and establish and sustain a local managed education in physiotherapy has been successful. The practical on-site support, respectful understanding of cultural differences between collaborators and patience with adaptation to changes was crucial to obtain the results.

**Kort foredrag, fredag 11.10-11.25, lokale 7-8**

### Innovation in habilitation for children with cerebral palsy - a cross sectorial and interdisciplinary model

*Patricia de Liphay Behrend*

*Elsass Fonden, Charlottenlund, Danmark*

**Background:** Through research and collaboration with professionals and families with children with Cerebral Palsy (CP), The Elsass Institute experienced a need for enhanced quality in the rehabilitation. This presentation is a part of the project Encircle the family – Target the child. The project is a cross sectorial and interdisciplinary project with the aim to increase the quality in rehabilitation of children with CP 0-8 years of age.

**Purpose:** There is a gap between what we know as interdisciplinary professionals in rehabilitation and what we do. It is therefore urgent that there is an early, well-coordinated and family centered intervention. The Elsass institute found a need to develop a new model. A model that supports the generation of competences for professionals and increases quality in rehabilitation for children with CP.

**Methods:** The model was developed during a collaboration between the faculty at Elsass institute, 415 professionals from five municipalities and three hospitals across Denmark and 63 families with children with CP. In this presentation, we focus on the outcome of the professionals.

The methods used was Participatory innovation, Relational coordination, and Action learning. The evaluation was performed by KORA. The methods were quantitative baseline questionnaire, qualitative interviews and study of literature on the field.

**Results:** Many different subjects were evaluated; these areas were highlighted: 74 % of the professionals got increased knowledge about CP; 60 % experienced enhanced quality in their rehabilitation with children with CP; 43 % experienced increased communication with other interdisciplinary professionals; 41 % experienced increased collaboration with

the families; 85 % of the professionals were very satisfied/satisfied with the method Eksperimentarie.

**Conclusion:** The use of the model enhances cross sectional and interdisciplinary rehabilitation and helps supports professionals in the process of implementing new knowledge and interdisciplinary coordination into practice. The model consists of the 3 most central elements in incurring successful implementation of applied science – Applying newest Knowledge, Methods for Collaboration, and Methods to Enacting knowledge into practice.

**Kort foredrag, fredag 9.55-10.10, lokale 9-10**

### Threshold values of ankle dorsiflexion and gross motor function in children with cerebral palsy – a cross-sectional study

*Helle Mätzke Rasmussen (1,2), J Svensson (2),*

*M Thorning (1), NW Pedersen (1,2), S Overgaard (0),*

*A Holsgaard-Larsen (1,2)*

*1) Department of Orthopedic Surgery and Traumatology, Odense University Hospital, Odense, Denmark*

*2) Department of Clinical Research, University of Southern Denmark, Odense, Denmark*

**Background and Purpose:** Threshold values defining three categories of passive range of motion (ROM) are used by the Cerebral Palsy follow-Up Program (CPUP) to guide clinical decisions. The aim of the study was to investigate the threshold values by testing the hypothesis that passive ROM in ankle dorsiflexion is associated with gross motor function and that function differs between the groups of participants in each category.

**Patients and Methods:** We analyzed data from sixty ambulatory children (aged 5-9 years) with spastic Cerebral Palsy. Outcomes were passive ROM in ankle dorsiflexion with flexed and extended knee and gross motor function (Gait Deviation Index (GDI), Gait Variable Score ankle (GVS), peak dorsiflexion during gait, 1-min walk, Gross Motor Function Measure, The Pediatric Quality of Life Inventory Cerebral Palsy Module and Pediatric Outcomes Data Collection Instrument).

**Results:** Significant ( $p < 0.05$ ) and moderate correlations were documented for ROM versus GVS ( $r = -0.374$  and  $r = -0.3377$ ) and ROM versus peak dorsiflexion ( $r = 0.488$  and  $r = 0.548$ ). Differences between the groups formed by the

categories were shown for GVS and peak dorsiflexion ( $p < 0.05$ ). No other significant correlations or differences between the categories were observed.

**Interpretation:** The results suggest that threshold values for ankle dorsiflexion used in the CPUP are of limited clinical value in assessing overall gross motor function, but may be used to identify deviations in ankle-specific gait function.

**Kort foredrag, fredag 10.10-10.25, lokale 9-10**

### Use of instrumented gait analysis for individually tailored interdisciplinary interventions in children with cerebral palsy – a randomized controlled trial

*Helle Mätzke Rasmussen (1,2), NW Pedersen (1,2), S Overgaard (1,2), A Holsgaard-Larsen (1,2)*

1) The Orthopaedic Research Unit, Department of Orthopaedic Surgery and Traumatology, Odense University Hospital, Odense, Denmark  
2) Department of Clinical Research, University of Southern Denmark, Odense, Denmark

**Aim:** To test the hypothesis that improvements in gait following interdisciplinary interventions when instrumented gait analysis is used are superior to those following 'care as usual'.

**Method:** A single-centre, prospective, single blind, parallel group, randomised trial investigating the effectiveness of interventions based on the use of gait analysis were conducted. Primary outcome was gait (Gait Deviation Index) and secondary outcomes were: walking (1-min walk test) and patient reported outcomes (Pediatric Evaluation of Disability Inventory, The Pediatric Quality of Life Inventory Cerebral Palsy Module and The Pediatric Outcome Data Collection Instrument). Follow up were done at 26 weeks (questionnaires) and at the primary endpoint at 52 weeks (all outcome).

**Results:** Sixty participants with cerebral palsy at GMFCS levels I/II, (median age 6y11m), were randomized to the two groups. No significant or clinical relevant between-group differences in change scores of the primary or secondary outcomes were documented.

**Conclusion:** Instrumented gait analysis to a case-mix of

ambulatory children with cerebral palsy, at an early age does not improve gait or patient reported outcome of disability and quality of life. Evidence on which specific children with cerebral palsy that benefit from use of the examination in clinical practice is lacking.

**Kort foredrag, fredag 10.25-10.40, lokale 9-10**

### Inter-rater reliabilitet af dansk Challenge-test af avancerede motoriske funktioner til børn og unge med cerebral parese

*Kirsten Nordbye-Nielsen (1,2), T Maribo (3,4), TF Gehlert (5), M Overgaard (6), O Rahbek (1,2), V Wright (7,8), B Møller-Madsen (1,2)*

1) Aarhus Universitet, Aarhus, Danmark  
2) Aarhus Universitetshospital, Aarhus, Danmark  
3) Institut for Folkesundhed, Aarhus Universitet, Aarhus, Danmark  
4) Region Midtjylland, DEFACTUM, Aarhus, Danmark  
5) FysioVital, Risskov-Rønde, Aarhus, Danmark  
6) Thomsen Fysioterapi, Randers, Danmark  
7) Holland Bloorview Rehabilitation Hospital, Toronto, Canada  
8) University of Toronto, Toronto, Canada

**Baggrund:** Cerebral Parese (CP) er en af de hyppigste årsager til motoriske funktionsnedsættelser hos børn. Børn og unge med CP på Gross Motor Function Classification System (GMFCS) niveau I & II har selvstændig gangfunktion og klarer de fleste daglige funktioner, men med nedsat koordination, tempo, udholdenhed og balance sammenlignet med jævnaldrende. De modtager ofte fysioterapi som en del af en tværfaglig intervention. Challenge-test til børn med CP på GMFCS niveau I & II, 5-18 år, er en ny observationel test udviklet til at måle evnen til præcision og tempo i udførelsen af 25 avancerede motoriske funktioner. Det er afgørende at vi har reliable målemetoder for at kunne tilrettelægge og måle effekten af indsatser til børn med CP. Challenge-testen har vist høj inter-rater reliabilitet i et canadisk studie.

**Formål:** At undersøge inter-rater reliabiliteten af den danske version af Challenge-test på børn i alderen 5-18 år med CP på GMFCS niveau I & II.

**Metode:** Challenge-test blev oversat efter ISPOR-guidelines og pilottestet på 10 børn inden undersøgelsen. Reliabilitetsundersøgelsen blev udført af tre fysioterapeuter der alle er

uddannet og kalibreret i brug af testen. En erfaren fysioterapeut (A) og to nyuddannede (B&C). To testere observerede på samme tid børn der gennemførte Challenge-test. Testerene var blindet for hinandens observation og scoring. På baggrund af scoringsmanualen blev råscore beregnet. Råscore blev omregnet til Challenge % Total score. Intraclass correlation coefficient (ICC) blev beregnet på Challenge % Total score.

**Resultat:** 41 børn blev testet. Erfaren (A) i forhold til uerfaren (B/C) ICC: 0.9997 (CI 0.9993-0.9998). Tester A mod tester B ICC: 0.9996 (0.9990-0.9998) (n=26), tester A mod tester C ICC: 0.9998 (0.9994-0.9999) (n=15). Mean difference: A mod B: -0.035 (-0.313; 0.244), for A mod C: 0.059 (-0.233; 0.352). Der var ingen statistisk signifikant forskel på erfaren og uerfaren tester:  $p < 0,0001$ .

**Konklusion:** Den danske oversættelse af Challenge-test har god inter-rater reliabilitet når tester er uddannet og kalibreret i brug af testen.

**Nøgleord:** Børn, Cerebral Parese, Reliabilitet, Grovmotorik

**Kort foredrag, fredag 10.40-10.55, lokale 9-10**

## Inklusions- og eksklusionsparadokset - når elever med autisme og ADHD skal inkluderes i skoleidrætten

*Anette Bentholm*

*University College Nordjylland, Skørping, Danmark*

**Baggrund:** Flere elever med diagnoser inden for autisme og ADHD er blevet inkluderet i folkeskolen i Danmark siden 2012. Folkeskolereformen fra 2014 har øget fokus på bevægelse og fysisk aktivitet, med henblik på at fremme elevernes sundhed og akademiske læring. Elever med autisme og ADHD har en udviklingsforstyrrelse, der ofte påvirker deres sociale kommunikation, kognition og motorik. Deres trivsel og deltagelsesgrad i skolen er generelt mindre end deres jævnaldrende uden diagnoser (Christensen & Nielsen, 2015), og målgruppen synes svær at inkludere. Det betyder, at elever med autisme og ADHDs forudsætninger for at deltage og blive inkluderet i skolens bevægelsesaktiviteter og idrætstimer udfordres, hvilket kan påvirke deres sundhed negativt. Derfor er forskningsspørgsmålet: Hvad muliggør og begrænser en inkluderende proces for børn med autisme og ADHD i skoleidrætten?

**Teoretisk ramme og Metode:** I undersøgelsen indgår 11 elever med autisme eller ADHD fra to forskellige skoler i Aalborg Kommune. Der anvendes en proces-sociologisk metodologi (Baur & Ernst, 2011). Til de makrosociologiske analyser inddrages dokumenter om mål for idrætsfaget i folkeskolen og inklusionsindsatsen lokalt. De mikrosociologiske analyser baseres på deltagende observationer i 45 idrætstimer af fokuselevernes interaktion og deltagelse, fire fokusgruppeinterviews af idrætslærerne, 11 individuelle interviews af eleverne, skolelederne og den pædagogisk konsulent i Aalborg Kommune, samt Social Network Analysis for at vurdere elevernes sociale status i idrætstimerne. Empirien er indsamlet i 2015 og analyseres ud fra processociolog Norbert Elias teorier om The Civilizing process (1994) og The Established and Outsiders (1994) og mikrosociolog Erving Goffmans teorier om Stigma (2014) og Hverdagslivets sociologi (2014).

**Hovedresultater og konklusioner:** De bedste intentioner om særhensyn og fritagelse af målgruppen fra skoleidrætten, medvirker sjældent til inklusion. Fokuselevernes generelle sociale position har også indflydelse på deres position i idrætstimerne, dvs. deres sociale position i idrætstimerne afhænger i mindre grad af deres idrætskompetencer. Ligeledes har elevernes evne til at udføre en "civiliseret adfærd" og deres evne til at vise skam betydning for, om elever med autisme eller ADHD bliver inkluderet i idrætstimerne. Størrelsen af den sociale enhed, holddannelsen i idrætstimerne, og idrætslærernes undervisningsmæssige og skolens organisatoriske rammer har også stor indflydelse på de inkluderende processer.

**Kort foredrag, fredag 10.55-11.10, lokale 9-10**

## Reliabilitet af Graded Cycling Test med Talk Test og 30 sekunders rejse-sætte-sig test til patienter i testosteronsænkende behandling for prostatacancer

*Maria Rothgart Petersen, A-M Ragle, P Østergren, A Vinther  
Herlev Hospital, Afdeling for Ergoterapi og Fysioterapi,  
Herlev, Danmark*

**Introduktion:** Testosteronsænkende behandling anvendes til patienter med prostatacancer for at nedsætte sygdomsprogression (1). Lavt testosteroniveau er forbundet med bivirkninger fx nedsat insulinfølsomhed og øget risiko for type 2 diabetes og hjertekarsygdomme (2). Patienter tilbydes



derfor holdbaseret træning og testes med Graded Cycling Test med Talk Test (GCT-TT) og 30 sekunders rejse-sætte-sig test (30s-CST) for at monitorere træningseffekt. Kendskab til testenes reliabilitet er nødvendig for at afgøre om en målt effekt kan regnes som udtryk for en reel forbedring. Reliabiliteten er ikke tidligere undersøgt hos denne patientgruppe.

**Formål:** At undersøge den absolutte og relative reliabilitet af Graded Cycling Test med Talk Test og 30 sekunders rejse-sætte-sig test til patienter i testosteronsænkende behandling for prostatacancer.

**Design:** Reliabilitetsstudie.

**Materiale og metode:** 60 patienter i testosteronsænkende behandling for prostatacancer.

Deltagerne udførte GCT-TT og 30s-CST med en kort pause imellem. Efter en pause på 1 time blev de to tests gentaget. Intraclass Correlation Coefficient (ICC2.1), Standard Error of Measurement med 95% sikkerhed (SEM95) og Smallest Real Difference (SRD) blev beregnet.

**Resultater:** Relativ reliabilitet for 30s-CST (ICC2.1) var 0.97 [95% CI: 0.94-0.98] med lille måleusikkerhed: SEM95: 1,9 gentagelser og SRD: 2,6 gentagelser. GCT-TT: ICC2.1 var 0.88 [95%CI: 0.81-0.93], SEM95: 22,7 Watt og SRD: 32,2 Watt.

**Konklusion:** For patienter i testosteronsænkende behandling for prostatacancer er reliabiliteten for 30s-CST høj og med 95% sandsynlighed er der tale om en reel forbedring ved 2 gentagelser for en gruppe af patienter og 3 gentagelser for individuelle patienter.

For GCT-TT er reliabiliteten god. En forbedring på over 22,7 Watt er udtryk for en reel forbedring på gruppeniveau mens individuelle patienter skal forbedre sig 3 trin (45 Watt), før der er tale om en sikker forandring. GCT-TT egner sig dermed bedre til at måle forandring hos grupper end hos individuelle patienter.

#### Referencer:

- 1) Pagliarulo V, Bracarda S, Eisenberger MA, et al. Contemporary Role of Androgen Deprivation Therapy for Prostate Cancer. *Eur Urol* 2012;61:11-25. doi:10.1016/j.eururo.2011.08.026
- 2) Keating NL, O'Malley AJ, Smith MR. Diabetes and cardiovascular disease during androgen deprivation therapy for prostate cancer. *J Clin Oncol* 2006;24:4448-56. doi:10.1200/JCO.2006.06.2497

**Kort foredrag, fredag 9.55-10.10, lokale 6**

## Perceived motivation and barriers for attending supervised training during admission for patients with haematological malignancies

*Lene Eibye Pedersen (1), IG Larsen (1), CM Jensen (2), AMK Petersen (1)*

*1) Aarhus Universitetshospital, Aarhus, Danmark*

*2) Specialehospitalet, Aarhus, Danmark*

**Background:** Patients diagnosed with haematological malignancies often undergo aggressive treatment protocols and experience treatment-related symptoms and side effects. These patients are hospitalised for prolonged periods of time and thus at risk of losing physical function. Research has shown that being physically active and exercise is important to improve and maintain physical function, quality of life and to reduce fatigue. Motivating patients to adhere to physical exercise during hospitalisation remains, however, challenging.

The objective was to gain an in-depth understanding of patients' motivation for and barriers towards participation in supervised training during admission to a haematological department.

**Methods & Materials:** A qualitative study was performed including 12 inpatients. During admission patients are offered daily training in small groups supervised by a physiotherapist. Six patients with and six patients without previous experience in attending supervised training, were interviewed. Interviews were analysed using the Self-Determination Behaviour Theory.

**Results:** The study showed that all patients 'suffered from cancer-related fatigue and loss of physical function. The six patients who had previously participated in supervised training had been exercising until diagnosed with haematological malignancies, they maintained their level of activity when not hospitalised. Their motivation for participation in supervised training was focused on fears of losing physical function as well as being social with other inpatients.

The six patients who did not participate in supervised training had all stopped exercising 1-2 years before diagnosed with a haematological malignancy. Their barriers for not participating were lack of engagement and information about the supervised training.

**Conclusion:** Patients participating in supervised training during admission were highly motivated because they continued being physically active during admission but also after discharge. Informing and coaching inpatients about supervised training and the benefits of being physically active may reduce barriers for participating in supervised training.

**Kort foredrag, fredag 10.10-10.25, lokale 6**

## Improvement of supervised training among inpatients with hematological cancer

*Lene Eibye Pedersen (1), IG Larsen (1), CM Jensen (2)*

1) Aarhus Universitetshospital, Aarhus, Danmark

2) Specialehospitalet, Aarhus, Danmark

**Background:** Patients diagnosed with haematological cancer often undergo aggressive treatments and are at risk of experiencing side effects related to their cancer disease and treatment. These patients are hospitalised for prolonged periods of time and loss of physical function is a frequent problem.

**Objective:** The aim of this study is to explore how supervised training for patients with haematological cancer during hospitalization can be improved.

**Design & Methods:** A cross-sectional survey was conducted consisting of: 1) questionnaires to inpatients with haematological cancer and 2) questionnaires to health professionals in the period from March to April 2015.

Since 2010 supervised training has been offered to all inpatients with haematological cancer. It includes a combination of strength and cardiovascular training and is adapted to the patient's different levels of functionality and is aimed at restoring functioning.

**Results:** A total of 79 patients (84 %) and 68 health professionals (64 %) responded the questionnaires. Sixteen percent of the patient knew that physical activity could reduce anxiety, 37 % depression and 66 % fatigue. Further 77 % of the patients reported that they didn't know when and 71 % how much physical activity is allowed during treatment.

The health Professionals also reported that they were uncertain when (40 %) and how much (52 %) the patients were allowed to exercise during treatment and more than half of the health professions had a need for more information about physical activity and haematological cancer.

**Conclusion:** Both patients and health professionals need more information about the importance of physical activity and haematological cancer during treatment.

**Kort foredrag, fredag 10.25-10.40, lokale 6**

## The effectiveness of exercise-based rehabilitation in patients with myeloproliferative neoplasms - an explorative study

*KM Pedersen (1), G Zangger (2), N Brochmann (2), BM Grønfeldt (2), A-D Zwisler (2), KC Hasselbach (1), Lars Hermann Tang (2)*

1) Hæmatologisk Afdeling, Roskilde, Sjællands Universitetshospital, Region Sjælland, Roskilde, Danmark

2) REHPA - Videncenter for Rehabilitering og Palliation, Region Syddanmark, Nyborg, Danmark

**Introduction:** Fatigue is a major burden for patients with Philadelphia-negative chronic myeloproliferative neoplasms (MPN), with consequential negative effects on daily life. Despite our increasing understanding of the huge symptom burden for these patients, the feasibility and effectiveness of exercise-based rehabilitation in this group has never been explored.

**Purpose:** To explore the feasibility and effectiveness of an interdisciplinary exercise-based rehabilitation intervention on fatigue and quality of life (QoL) in patients with MPN.

**Methods:** At the Danish Knowledge Centre for Rehabilitation and Palliative Care, a five day interdisciplinary exercise-based rehabilitation intervention was carried out on 48 patients with MPN, followed by three months of home-based exercise. Before the intervention and at follow-up, participants filled out validated questionnaires; Brief Fatigue Inventory, Multidimensional Fatigue Inventory, European Organization for Research and Treatment of Cancer Quality-of-Life questionnaire, Myeloproliferative Neoplasm Symptom Assessment Form, and the Hospital Anxiety and Depression Scale. Physical capacity was measured using maximal oxygen uptake (incremental exercise test) and strength (30-s chair-stand test and hand-grip dynamometry). Paired T-tests were used to compare scores between baseline and follow-up. Effect size on the primary outcomes was calculated by Cohen's *d*.

**Results:** In total, 45 participants (94%) completed the follow-up outcome measures. No significant differences were observed in questionnaire scores when comparing baseline and follow-up. Effect size showed a small effect ( $d=0.28$ ) on physical fatigue and for all other primary outcomes effect size was below 0.20. Mean maximal oxygen uptake increased from 27.2 ml/kg2min to 33.6 ml/kg2min ( $p<0.001$ ). Handgrip strength in both hands ( $p=0.01$ ) and the 30-s chair-stand test ( $p<0.001$ ) also improved significantly.

**Conclusion:** We did not find any significant changes in fatigue nor QoL, however, we did observe a significant increase in upper and lower body strength and maximal oxygen uptake. We recommend further research into this unexplored area, to design and test interventions that will reduce the symptom burden for MPN patients and restore their QoL.

**Kort foredrag, fredag 10.40-10.55, lokale 6**

## Depression, socioeconomic factors and ethnicity as predictors of cardiorespiratory fitness before and after cardiac rehabilitation

*Nicolai Mikkelsen, C Dall, A Holdgaard, M Frederiksen, H Rasmusen, E Prescott*  
*Bispebjerg/Frederiksberg Hospital, Copenhagen, Denmark*

**Background:** Cardiorespiratory fitness (VO<sub>2</sub>peak) is an important predictor for all-cause mortality and morbidity and is improved following cardiac rehabilitation (CR). Cardiac patients with psychosocial or socioeconomic problems have less compliance with CR programs and may benefit less.

**Purpose:** To determine whether cardiac patients with psychosocial or socioeconomic problems have lower VO<sub>2</sub>peak and whether these factors modify the effect of CR.

**Methods:** Retrospective cohort study of patients with ischemic heart disease, valvular heart disease, or heart failure referred for CR at a single centre in Copenhagen, Denmark. VO<sub>2</sub>peak was assessed by a maximal cardiopulmonary exercise test. Pre-existing depression was defined by use of antidepressants and new onset depression by a modified PRIME-MD questionnaire at CR uptake. Socioeconomic status was defined by educational attainment and working status; ethnicity as Western-European or non-Western-European.

**Results:** Full data from baseline assessment was available on 1217 patients and follow-up on 861 patients. Mean VO<sub>2</sub>peak before CR was 21.84 (SD±6.7) ml/kg/min. After multivariate adjustment lower VO<sub>2</sub>peak was associated with lower educational attainment, not working and non-Western ethnicity but not with depression. Mean improvement of VO<sub>2</sub>peak following CR was 2.38 (SD±4.3) ml/kg/min. After multivariable adjustment educational attainment, employment status and ethnicity were significant predictors of improvement of VO<sub>2</sub>peak while depression was not.

**Conclusion:** Education, attachment to the work force and ethnicity were all associated with lower VO<sub>2</sub>peak before CR and the disparity was increased following CR. Having pre-existing depression and new onset depression did not influence VO<sub>2</sub>peak either before or after CR. These results point to important subgroups in need of specially tailored rehabilitation programmes.

**Keywords:** Cardiac rehabilitation, cardiac patients, depression, socioeconomic status, ethnicity, cardiorespiratory fitness

**Kort foredrag, fredag 10.55-11.10, lokale 6**

## LØRDAG 14. APRIL

### Mechanisms influencing the implementation of a programme for people with low back pain - GLA:D®Back

Inge Ris, P Kjær, J Hartvigsen, A Kongsted  
Syddansk Universitet, Odense, Danmark

**Introduction:** Back pain is the main cause of disability globally and is associated with poor general health, and increased utilisation of health care. Over half of those treated in primary care for back pain, report pain after one year, indicating low efficacy of current models of care. Therefore, the Danish Health Authority developed clinical guidelines for the management of low back pain in 2016 [1, 2]. To help implement recommendations from these guidelines, we developed the GLA:D®Back programme, which translates key messages into a patient education and exercise programme, and taught to clinicians in primary care by two-day courses.

Clinicians' implementation of this programme in their clinics is unclear and can be affected by several factors. We used the Determinants of Implementation Behavior Questionnaire (DIBQ), an instrument assessing 18 domains related to implementation processes, previously used in implementation studies to quantify these factors.

**Objectives:** To quantify mechanisms that may influence the implementation process of GLA:D®Back in primary care management of people with low back pain.

**Methods:** Design: Uncontrolled experimental design

**Participants:** Physiotherapists and chiropractors (total 31) who participated in a 2-days GLA:D®Back course

**Outcomes:** DIBQ assessing selected domains associated with implementation of GLA:D®Back used upon completion of the GLA:D®Back course (DIBQ-expectations of elements influencing implementation process) and after 4 months (DIBQ-explicit elements influencing the implementation process).

**Results:** Participants experienced social context and factors related to organisation of their daily framework as strongest facilitators for implementation, followed by their intentions to implement the programme, knowledge and skills of the programme. The barriers towards implementation are less clear. These, and results from the 4-month follow-up will be presented at the congress.

**Conclusion:** Clinicians' expectations of facilitators of the implementation process demonstrate high positive expectations on organisational and social context factors.

#### References:

1. Sundhedsstyrelsen: National klinisk retningslinje for behandling af nyopståede lænderygsmærter. Copenhagen; 2016.
2. Sundhedsstyrelsen: National klinisk retningslinje for ikke-kirurgisk behandling af nylig opstået lumbal nerverods-påvirkning (lumbal radikulopati). Copenhagen; 2016.

#### Kort foredrag, lørdag 10.40-10.55, Sjælland

### Neurophysiologic pain-education for patients with chronic low back pain – a systematic review and meta-analysis

Heidi Tegner (1), P Fredriksen (2), BA Esbensen (3), C Juhl (4,5)

1) Klinik for Ergo- og Fysioterapi, Rigshospitalet Glostrup, Glostrup, Danmark

2) Professionshøjskolen Metropol, København, Danmark

3) Videnscenter for Reumatologi og Rygsygdomme, Rigshospitalet Glostrup, Glostrup, Danmark

4) Afdelingen for Ergoterapi og Fysioterapi, Herlev og Gentofte Hospital, Gentofte, Danmark

5) Forskningsenheden for Muskuloskeletal Funktion og Fysioterapi, Institut for idræt og biomekanik, Syddansk Universitet, Odense, Danmark

**Objective:** To evaluate the effect of Neurophysiologic Pain-Education (NPE) for patients with Chronic Low Back Pain (CLBP).

**Methods:** A systematic search were performed in 6 electronic databases, and eligible RCTs had at least 50 % with CLBP and NPE was compared with no intervention or usual care. Methodological quality was assessed independently by the two review-authors using the Cochrane Risk of Bias tool. The effect of NPE was summarized in a random effect meta-analysis for pain, disability and behavioral attitudes. Effect was estimated as weighted mean difference (WMD) if outcomes within a domain were on the same scale, alternatively as standardized mean difference (SMD). The overall quality of evidence was evaluated according to the GRADE guidelines.

**Results:** Seven RCT studies (6 low and one high quality) were included. Statistical significant difference in pain were found after treatment, WMD=-1.03 (95%CI -0.55; -1.52), and after 3 months, WMD=-1.09 (-2.17;0.00) in favor of NPE. Furthermore statistical significant lower disability were found in the NPE group after treatment SMD= -0.47 (-0.80; -0.13)

and after 3 months SMD= -0.38 (-0.74; -0.02). Difference in reduction in Tampa Scale of Kinesiophobia was not statistically significant WMD= -5.73 (-13.60; 2.14) and after 3 months WMD= -0.94 (-6.28; 4.40) in favor of NPE.

**Discussion:** There was moderate evidence supporting that NPE has a small to moderate effect on pain and low evidence of a small to moderate effect on disability just after the intervention. NPE has a small to moderate effect on pain and disability at 3 months follow-up in patients with CLBP.

**Keywords:** pain, education, neurophysiology, low back pain, systematic review

**Kort foredrag, lørdag 10.55-11.10, Sjælland**

### The efficacy of cognitive functional therapy compared to usual care for people with non-specific persistent low back pain in a secondary care setting - a feasibility cohort study

Kasper Ussing (1), P O'Sullivan (2), R Jensen (1,3), P Kent (2), A Smith (2), B Schiøttz-Christensen (1), P Kjær (3)  
 1) Rygcenter Syddanmark, Middelfart, Fyn, Danmark  
 2) Curtin University, Perth, WA, Australia  
 3) Syddansk Universitet, Odense, Fyn, Danmark

**Background:** Pain in the lower back is the greatest cause of health-related disability. Non-successful outcome of primary care interventions might send patients on a trajectory of expensive and high-risk interventions with little chances of success. Therefore, inexpensive and low risk interventions are warranted. Cognitive Functional Therapy is a multi-dimensional clinical framework, which previously has demonstrated promising results in patients with persistent low back pain.

**Objectives:** The objective of this study was to investigate the efficacy of Cognitive Functional Therapy (CFT) compared to usual care.

**Methods:** The study was performed in a cohort of patients with non-specific persistent low back pain in a secondary care setting. A total of 39 patients were conveniently selected for the CFT intervention and received treatment for 12 weeks. From the clinics' database, SpineData, 185 matched control-cases receiving usual care were selected. The prima-

ry outcome was disability measured with the Roland Morris Disability Questionnaire (RMDQ), with the minimal clinical important change defined as a 38% reduction. The group differences at 6 and 12 months follow-up were analysed using multilevel, mixed-effects linear regression models and reported as means with 95% confidence intervals.

**Results:** The CFT group went from a RMDQ-score of 61 (56-66) to 22(13-31) at six months and 33(19-49) at 12 months. The corresponding scores on RMDQ for the control group was 62 (59-64), 44(40-48) and 40(36-45). The difference between the groups was statistically significant at six months -20.7(-27.2; -14.2) but not at 12 months -8.1 (-17.4 to 1.2). The reduction on the RMDQ within the CFT group remained clinically relevant at 6 and 12 months, whereas the control group did not meet this criterion at any time-point. For secondary outcomes statistically significant differences between the groups were noted for leg pain intensity and fear at 12 months. Furthermore, the CFT-group demonstrated larger treatment satisfaction.

**Discussion:** This study suggests that CFT might be of benefit for patients with non-specific persistent low back pain who have not had successful outcomes of conventional primary care interventions. In future trials, booster sessions, in case of relapses, might be necessary to maintain the large effects at long term follow-up.

**Kort foredrag, lørdag 11.10-11.25, Sjælland**

# POSTERS



## TORS DAG 12. APRIL

### Ny potentiel konditertest til personer med apopleksi. Åstrands et-punkts cykelergometertest udført unilateralt med mindst afficerede ben efter apopleksi

Jørgen Roed Jørgensen

Center for Hjerneskade, København, Danmark

**Baggrund:** Iltoptagelse efter apopleksi er ofte lav og kan have betydning for funktionsevne, recidiv og inaktivitetsrelaterede lidelser. Konditionstræning anbefales derfor af Sundhedsstyrelsen, og i visitationsretningslinje fra 2014 for genoptræning efter erhvervet hjerneskade stilles krav til en systematisk dokumentation af interventioners effekt.

En nøjagtig konditionstest kræver udstyr, der kan måle ilt- og kuldioxidkoncentrationer samt volumen på udåndingsluften under udførelse af en VO<sub>2</sub>max test. Opnåelse af maksimal puls er vanskeligt efter apopleksi, og VO<sub>2</sub>peak er derfor den mest benyttede test i forskning. Åstrands cykelergometertest (ÅC) benyttes derimod i klinisk praksis, da den er simpel at udføre og flere personer kan gennemføre den. Testen er dog ikke valideret til målgruppen, og følger efter hemiparese som nedsat kraft og ændret muskeltonus kan influere på testresultat. For at imødegå disse problemstillinger afprøves i dette studie ÅC med unilateral udførelse med det mindst afficerede ben. Den mindre aktiverede muskelmasse under et-bens cykling vil pga. en lavere nytteværdi medføre et lavere estimat af den maksimale iltoptagelse end ved bilateral cykling. Hvis nyttevirkningen ved unilateral og bilateral cykling kan måles, kan en korrektionsfaktor (A-faktor) udregnes. Efterfølgende kan den estimerede maksimale iltoptagelse korrigeres med A-faktor.

En sådan test vil være yderst brugbar i rehabiliteringspraksis, og i højere grad gøre testning og dokumentation af træningseffekt mulig.

**Materialer og metode:** Ti personer med lette til moderate følger efter apopleksi i kronisk stadie, udfører ÅC med mindst afficerede ben og belastning på hhv. 25 og 50 watt. Nyttvirkning under testen sammenlignes med en kontrolgruppe (KG) på 10 personer, som udfører samme test bilateralt.

**Resultater:** Ni personer gennemfører ÅC med mindst afficerede ben. Mean nyttevirkning er 40 % lavere end KG's nyttevirkning og måles til 13.4 % med et konfidensinterval på 11.6 – 15.2.

A-faktor beregnes til 1,4.

**Konklusion:** ÅC kan udføres med mindst afficerede ben, og nyttevirkning af arbejdet ser ud til at kunne danne bag-

grund for en A-faktor til korrektion af estimeret iltoptagelse ved ÅC. Deltagerne er ikke repræsentative for målgruppen og resultatet kan ikke generaliseres. Implementering i klinisk praksis kræver en validering med en større og mere generaliserbar population.

Postergruppe A, torsdag 13.35-14.05, Jylland

### Intravenous saline administration in patients with severe acquired brain injury and orthostatic intolerance for tilt-table mobilization

Christian Riberholt (1), N Olesen (2,3), P Hovind (4), J Mehlsen (5), T Petersen (1)

1) Research Unit on Brain Injury Neuro Rehabilitation Copenhagen, Department of Neurorehabilitation/ TBI Unit, Rigshospitalet, Copenhagen, Denmark

2) Department of Anaesthesia, Rigshospitalet, Copenhagen, Denmark

3) Department of Neuroscience and Pharmacology, University of Copenhagen, Copenhagen, Denmark

4) Department of Clinical Physiology, Nuclear Medicine and PET, Rigshospitalet, Copenhagen, Denmark

5) Syncope Centre, Department of Cardiology, Bispebjerg & Frederiksberg Hospital, University of Copenhagen, Frederiksberg, Denmark

**Background:** Patients with severe acquired brain injury and low levels of consciousness present with impaired autoregulation of cerebral blood flow more than one month after the initial injury. The mechanisms behind have been sparsely investigated. This study investigated the effect of intravenous saline administration on orthostatic hypotension during head-up tilt in patients with severe acquired brain injury and the changes in the renin-angiotensin-aldosterone system before and after head-up tilt.

**Methods and procedures:** Fourteen patients with acquired brain injury, low level of consciousness and orthostatic hypotension were monitored before, during and after head-up tilt with non-invasive beat-to-beat blood pressure measurement, and transcranial Doppler determination of middle cerebral artery blood flow velocity. Blood samples were collected before and after two head-up tilt sessions separated by one hour rest in which saline was administered intravenously.

**Results:** The duration of head-up tilt did not change after saline administration due to orthostatic hypotension. The patients showed signs of reduced cerebral autoregulation at both head-up tilt sessions. The patients had significant lower level of renin and angiotensin II but not aldosterone, the latter remaining unchanged.

**Conclusions:** No improvement was demonstrated in standing time in patients with severe acquired brain injury and orthostatic hypotension. We observed reduced plasma renin and angiotensin II after two head-up tilt sessions and one hour fluid administration. Research focusing on the ability to retain fluid after severe brain injury and prolonged bed rest is warranted.

#### Postergruppe A, torsdag 13.35-14.05, Jylland

### A novel health professional-led stroke self-management intervention - an evaluation study

Hanne Pallesen, SL Sørensen, S Pedersen, LQ Kristensen, ET Næss-Schmidt

Regionshospital Hammel Neurocenter, Bjert, Danmark

**Background:** Stroke will often involve physical, psychological, cognitive and behavioral difficulties which can cause an unexpected interruption of a normal life cycle. This may increase the risk of reduced self-management. The current feasibility study describes the active components of a novel health professional-led self-management support intervention and the process evaluation as an essential part of designing and testing this complex intervention.

**Purpose:** The main aim of the study is to evaluate an intervention of supporting older stroke adults and their informal caregivers to regain their former active lifestyle, or to create a new meaningful life perspective.

**Methods:** A process evaluation of the design and testing of complex intervention - a professional-led self-management support intervention - was carried out according to the Medical Research Council. The process evaluation included interviews of four older stroke survivors (range 65-X) and their informal caregivers, an occupational therapist, a physiotherapist and the two researchers developing the concept of the intervention. Patients, informal caregivers and thera-

pists were interviewed at baseline (1 weeks before admission from the hospital) and six months after.

**Findings:** The process evaluation will be finished late autumn 2017.

The preliminary findings revealed eight themes as invariant structures: 1) 'Individual approach,' 2) 'A way to communicate,' 3) 'Establishing a good relation,' 4) 'Active reflection,' 5) 'To take the initiative and responsibility,' 6) 'Transfer to context and involving the network,' 7) 'Significant pedagogical help tools' and 8) 'The design of the novel self-management intervention.'

#### Postergruppe A, torsdag 13.35-14.05, Jylland

### Udviklingsprojekt: Balancehold til patienter med erhvervet hjerneskade

Line Bjerre Sørensen

Hammel Neurorehabilitering, Hammel, Danmark

**Baggrund:** Trods meget forskellige fysiske udfordringer har stort set alle patienter på Hammel Neurocenters kognitive klinik for hjerneskadede patienter påvirket balance.

Australske fysioterapeuter arbejder med evidensbaseret balancetræning og har i Danmark i 2017 afholdt kurser i "Lower Limb og Postural adjustments". På kurserne omsettes evidens for postural træning til balancetræning i praksis. Den nye viden har resulteret i opstart af balancehold på Hammel Neurocenter.

**Formål:** Lave evidensbaseret balancetræning hvor:

- Træningen foregår på hold
- Træningsintensiteten er høj
- Patienterne udfordres maksimalt
- Patienterne er motiverede og tager ejeskab for egen rehabilitering
- Patienterne kan inspirere hinanden

**Metode:** Udviklingsprojekt - opstart af balancehold. Fysioterapeuterne er blevet undervist i den nyeste viden om postural kontrol og balancetræning. Herefter er de fysiske rammer for og fagligt indhold i balancetræningen beskrevet og igangsat.

Med et simpelt set-up og begrænsede redskaber er det muligt at træne et stort antal patienter (typisk 6-10 deltagere) på mange forskellige niveauer på samme tid og samti-



dig skabe "hold-ånd" og en følelse af at være i samme båd. Som udgangspunkt kører alle de samme øvelser, men individuelt tilpasset, så alle trænes indenfor nærmeste udviklingszone. Alt efter patienten problem kan træningen foregå stående, siddende og/eller liggende.

Patienterne er med til at sætte mål for hvad de kan opnå med træningen.

#### Evaluering af indsatsen:

- Fysioterapeuterne på Hammel Neurocenter har opnået gode erfaringer med balancehold.
- Fysioterapeuterne er blevet mere bevidste om at finde det rette niveau for træningen hos den enkelte patient og kan derved i højere grad individualisere øvelserne.

Det har vist sig muligt at kunne udfordre alle på deres balance uanset funktions niveau.

Balanceholdet, som kører 2 x ugtl. er et supplement til den øvrige individuelle træning og giver derved mulighed for at øge træningsmængden på ugebasis.

Intensiteten er høj og alle presses på både balance, styrke og udholdenhed.

Betydning for praksis: Udviklingsprojektet bidrager med viden om hvordan man med de samme ressourcer kan øge patienters træningsmængde og samtidig udfordre patienterne maksimalt. Projektet bidrager med viden om hvordan man kan tilrettelægge holdtræning så patienterne motiveres og tager ejerskab for egen rehabilitering.

#### Postergruppe A, torsdag 13.35-14.05, Jylland

### Fysisk træning af unge med træthed efter erhvervet hjerneskade: Et eksperimentelt, ikke-randomiseret pilotstudie

*Michelle Bærentzen, S Tibæk, HB Forchhammer, A Norup Rigshospitalet, Neurologisk Klinik, Projekt Styrket Indsats for unge med erhvervet hjerneskade, Danmark*

**Baggrund:** Hos patienter med erhvervet hjerneskade er træthed et kendt og vedvarende symptom. Trætheden påvirker dagligdagsaktiviteter, evnen til at fastholde arbejde og livskvalitet (1, 2).

**Formål:** At evaluere selvoplevet træthed, konditionsniveau samt forarbejdnings-tempo før og efter intervention med seks ugers højintensitets konditionstræning hos unge med erhvervet hjerneskade.

**Metode og materiale:** Et ikke-randomiseret pilotstudie med 10 deltagere rekrutteret fra Projekt Styrket indsats i Region Hovedstaden, 7 kvinder og 3 mænd med en gennemsnitsalder på 27 (SD 6,34) år. Inklusionskriterierne var: erhvervet hjerneskade indenfor tre mdr. - 5 år, patologisk træthed ( $\geq 12$  på "generel træthed" på Multidimensional Fatigue Inventory (MFI-20)) og fri mobilisering. Træthed målt på MFI-20 med underskalaerne "Generel træthed", "Fysisk træthed", "Mental træthed", "Reduceret motivation" og "Reduceret aktivitet". Konditionsniveauet målt med Watt-max test og deraf VO<sub>2</sub>max samt kondital og forarbejdnings-tempo målt med Trail Making Test (TMT) A og B samt Symbol Digital Modalities Test (SDMT).

Interventionen bestod af højintensitets intervaltræning på ergometercykel med fysioterapeutisk supervision over seks uger med tre træningspas om ugen.

**Resultat:** I alt gennemførte 6 kvinder interventionen. Resultaterne indikerede signifikant reduktion af træthed målt på dimensionerne "Fysisk træthed" ( $p = 0,03$ ) og "Reduceret motivation" ( $p = 0,02$ ) og der var en tendens til fremgang på dimensionerne "Reduceret aktivitet" ( $p = 0,08$ ) og "Mental træthed" ( $p = 0,06$ ) på MFI-20. Deltagerne havde signifikant fremgang af konditionsniveauet på watt max ( $p < 0,01$ ), VO<sub>2</sub>max ( $p < 0,01$ ) og kondital ( $p < 0,01$ ). Ved forarbejdnings-tempoet sås signifikant fremgang på TMT A ( $p < 0,01$ ) og SDMT ( $p = 0,01$ ).

**Konklusion:** Pilotstudiet indikerer, at træthed og forarbejdnings-tempo sandsynligvis kan bedres med højintensitets konditionstræning. Interventionen synes desuden at være tilstrækkeligt til at opnå forbedret konditionsniveau. Det vil være relevant at udføre et randomiseret, kontrolleret studie for at bekræfte disse fund.

#### Referencer:

1. Norup A, Svendsen SW, Doser K, Ryttersgaard TO, Frandsen N, Gade L, et al. Prevalence and severity of fatigue in adolescents and young adults with acquired brain injury: A nationwide study. *Neuropsychological rehabilitation*. 2017; 1-16.
2. Wu S, Kutlubaev MA, Chun HY, Cowey E, Pollock A, Macleod MR, et al. Interventions for post-stroke fatigue. *Cochrane Database Syst Rev*. 2015;7:CD007030.

#### Postergruppe A, torsdag 13.35-14.05, Jylland

## Hvilken læringsmæssig betydning har det for fysioterapeutstuderende, at der etableres autentiske settings med patienter/borgere i teoriundervisningen?

*Elsebeth Hovmøller, GB Andersen*

*VIA University College, Holstebro, Danmark*

**Baggrund** for projektet: Projektet arbejder ud fra en hypotese om, at der er et uudnyttet læringspotentiale i fellet mellem teoretisk og klinisk undervisning. Læringspotentiale ligger i at udvikle nye læringsformer, som tager udgangspunkt i at skabe større grad af transfer i den teoretiske undervisning ved at etablere autentiske settings for de studerende hvor patienter/borgere indgår i den teoretiske undervisning (Aarkrog og Wahlgren; 2013). Et såkaldt 3. læringsrum

**Formål:** Formålet med projektet er at undersøge hvilket læringspotentiale, der ligger i det 3. læringsrum og på hvilken måde det træner fysioterapeutstuderendes professionelle kompetencer.

**Metode:** Projektet arbejder ud fra en kvalitativ tilgang med afsæt i en dialogisk aktionsforskningsmetode (Pettersson og Lindskov; 2014). Aktionerne i projektet er, at udvikle og implementere nye praksis situationer i den teoretiske undervisning. Projektet består i systematisk at beskrive og evaluere nye tiltag og undersøge læringspotentialet i disse. Der er foretaget fire kvalitative fokusgruppinterviews af 25 studerende på 3. semester.

**Konklusion:** Konklusionen er, at der ligger et stort læringspotentiale i det 3. læringsrum. De studerendes motivation, ansvarsfølelse og seriøsitet øges, når patienter/borgere indgår i den teoretiske undervisning. De studerende får trænet såvel fagspecifikke som generiske kompetencer.

Det kan også konkluderes, at den organisatoriske ramme for aktionerne er det helt afgørende for de studerendes læring, og den skal prioriteres højt. En tydelig rammesætning skaber tryghed for de studerede, hvilket er vigtigt for de studerende mulighed for læring. Undersøgelsen viser også, at de studerende lærer meget i rummet sammen med andre studerende, hvor der ikke er en underviser til stede. Det skaber et godt transferklima, hvor der er tryghed og oplevelsen af at være på "samme niveau" og det bevirker, at de studerende tør mere, har mere mod på at fejle og lære af deres fejl.

Undersøgelsen viser, at ressourceforbruget ift. planlægningen fuldt ud står mål med læringsudbyttet for de studerende.

**Postergruppe B, torsdag 13.35-14.05, Sjælland**

## Tabletteknologi fysioterapi - et pædagogisk redskab i klinisk undervisning

*Lene Duus*

*Fysioterapeutuddannelsen, UCN, Aalborg, Danmark*

**Projektbaggrund og formål:** Projektet var at afprøve, evaluere og implementere forskellige måder at anvende videooptagelser i klinisk undervisning på Fysioterapeutuddannelsen med det formål at øge refleksionen og dermed læringen for studerende. Der har hovedsageligt været fokus en app beregnet til bevægeanalyse samt en app med træningsprogrammer, der kan målrettes den enkelte patient. Optagelser af forskellige seancer med studerende, hvor de efterfølgende har kunnet kigge på sig selv i et metaperspektiv, har også været i spil.

**Metode:** Projektet er et udviklingsprojekt, som er bygget op som aktionsforskning med et kvalitativt design. Empiri er indsamlet i form af struktureret formativ evaluering via fokusgruppinterviews undervejs i processen og i slutningen af projektperioden ved henholdsvis semistrukturerede fokusgruppe - og individuelle interviews med studerende og kliniske undervisere.

**Deltagere og forløb:** Projektet forløb i en kliniske undervisning på 9 uger på modul 9 samt 3 uger på modul 13. To kliniske undervisningssteder; et Kommunal genoptræningssted og en Klinik for Fysioterapi med 1 klinisk underviser og 4 studerende hvert sted samt en studerende på modul 13 har deltaget. Hver deltager lånte en Ipad i perioden. Der er indsamlet informeret samtykke hos alle deltagere.

**Resultater:** Inddragelse af videooptagelser generelt i den kliniske undervisning har vist sig at understøtte de studerendes læring. De studerende oplever, at de har haft mest glæde af en app til bevægeanalyse. App'en har efter startbarrierer støttet dem i læring i forhold til at huske og forstå bevægeanalyse samt i deres kommunikation med borgeren. Det har givet mere fokus og de har følt sig mere motiverede. Analysen af de indsamlede data viser, at de studerende har formået at bruge tabletteknologi i form af selvregulerende læringsstrategier, som hukommelsesstrategier, sociale læringsstrategier og til en vis grad metakognitive læringsstrategier. De studerende oplever at brugen af videooptagelser med tablets har højnet refleksionen på videns, færdigheds -og kompetenceniveau. En klinisk underviser har efterfølgende arbejdet videre med at anvende videooptagelser af studerende i interventionen med borgere for at understøtte en metakognitiv læringsstrategi.

**Nøgleord:** Klinisk undervisning, tabletteknologi, refleksion.

**Reference:**

www.ucviden.dk, Duus, L, 2015. Tablet-teknologi i Fysioterapi – et pædagogisk redskab i klinisk undervisning.

**Postergruppe B, torsdag 13.35-14.05, Sjælland**

## Innovation-camp as method in health education - a study on inter-discipline, learning and participation

Lene Duus, B Ringby

Fysioterapeutuddannelsen, UCN, Aalborg, Danmark

**Background and Purpose:** Society calls for creative, innovative and enterprising health professionals who have abilities to work interdisciplinary. New learning methods are required to develop new skills. Health care students must develop skills that enable them to create and develop new services in new or existing organizations. Teaching interdisciplinary cooperation in relation to creativity, innovation and entrepreneurship requires an unconventional approach. Students must not only learn ABOUT interdisciplinary work and its theories - they must also be trained to DO so. Thus Camp as a learning activity was introduced to engage students to try out how to cope with uncertainty, complexity and to take action in collaboration with peers from other healthcare BA programs.

**Methods:** An 8-week interdisciplinary module with approximately 235 students from five health care BA programs (physiotherapy, midwifery, radiography, occupational therapy and nursing) participated in one 24-hour innovation camp during 2014-2016 – altogether 1175 students. A specific health-topic was chosen for each camp. Participation was compulsory. Four lecturers were involved as professional supervisors. 12-24 Innovation and Entrepreneurship bachelor-students participated as facilitators during each camp as a peer-to-peer learning activity. Ideas developed by interdisciplinary groups of six-seven students were presented to and evaluated by 'Critical friends' from outside the UCN. Five camps were evaluated by students from 2014 to 2016. Data consisted of on-line questionnaires with closed and open ended questions. 487 questionnaires were completed.

**Results:** Findings showed that 86 % of students evaluated the camp-topic as relevant, 59 % that peer facilitators gave sufficient input during the process and 93 % evaluated themselves as active and participating. Students stated that facilitators had knowledge on innovation processes and

therefore capable of guiding and creating a positive learning environment. Findings also pointed out that the camp format can provide energy, possibility for interesting discussions and new challenging learning experiences.

Camp as a learning activity based on peer-facilitation and interdisciplinarity combined with a professional innovative focus seems to be a relevant and rewarding approach when trying to engage students to think differently. Camp as a method has been implemented in curricula for five health care BA-programmes.

**Keywords:** Interdisciplinarity, innovation-camp, education

**Postergruppe B, torsdag 13.35-14.05, Sjælland**

## Faglig udvikling, forskning og frække fredage - udviklingsprojektet KUUFFert i Fysio-Ergoterapien, Hvidovre Hospital

Jette Christensen

Fysio-Ergoterapien, Amager Hvidovre Hospital, Hvidovre, Danmark

**Formål:** Strategisk udviklingsprojekt, der binder forskning, udvikling og klinisk hverdag tættere sammen.

Med udgangspunkt i Clinical Academic Groups (CAGS) fra Kings Colleges – udvikles en model for samarbejde, hurtig og relevant kommunikation ml. klinikerne i afdelingen og forskerne. For bedre og hurtigere at få fat i de kritiske spørgsmål samt omsætte og implementere forskningsresultaterne.

**Baggrund:** Region Hovedstadens og AmagerHvidovre Hospitals fokus på innovation og forskning gav grobund for udviklingsprojektet. Afdelingsledelse og afdelingens forskningsansvarlige havde grundtankerne til at skabe bedre sammenhæng ml. forskning og den kliniske praksis. I samarbejde med eksternt firma Mobilizer og hospitalets udviklingskonsulent blev KUUFFert projektet konkretiseret.

**Metode:** Trindelt forløb.

Kick off: Ide introduceres, Appetizer - på personalemøde. Observation af feltet, udviklingskonsulent på studiebesøg med klinikerne.

Grobund skabes: studiebesøg, oplæg og workshops hvor Prime movers: repræsentanter fra forskellige områder - er samskabere i ide degenerering og budbringere af input fra deres respektive områder. Prime movers er Klinikerne -

frontpersonalet, udviklingsterapeuter, undervisere i klinisk praktik, afd. terapeuter, forskere og tillidsfolk der via denne Bottom-up proces i samarbejde med udviklingskonsulenter, Afd. ledelse og forskningsansvarlige skaber temadagsoplægget  
 Temadag i afdelingen omkring KUUFFert projektet.  
 Opsamling med konsulentfirma. Prioritering og planlægning af konkrete tiltag

**Resultat:** Temadag for hele afdelingen der inddrog alle og skabte mening med KUUFFert projektet og generere konkrete ideer til næste fase.

Det hele grafisk illustreret via grafisk tegner.

Forskningsprojekter og kliniske problemstillinger tages op på personaleundervisning. Viden fremlægges, der stilles spørgsmål fra både klinikere, studerende og fra forskerne til klinikerne og konklusion for klinisk impact laves inden hvert møde sluttet.

Mange ideer blev udviklet og der skal nu prioriteres i disse.

"Frække Fredage" – "Forskningen ud på gulvet" og "10 spørgsmål til Professoren", er nu på tapetet til efteråret 2017.

Oppetid og aktivitet for patienter på akuthospital samt hurtig fys-ergo udredning, sektorovergange og genoptræning bliver nogle af de kommende temaer.

#### Referencer:

- 1 Pink, Daniel; Hvad er motivation? (2009), Riverhead Books.
- 2 Kotter, J; Our Iceberg is Melting, (2006) Macmillan
- 3 Rasmussen, Barlebo, Søren; Potentiale Ledelse.(2014) Barlebo Forlag
- 4 Westley, F; Zimmermann, B; Patton, M; Getting to maybe, (2007) Vintage Canada

#### Postergruppe B, torsdag 13.35-14.05, Sjælland

### Predictors of basic mobility skills at discharge in 235 patients with hip fracture

Caspar Hansen (1), D Melgaard (2)

1) Regionshospital Nordjylland, Fysio- og Ergoterapien, Hjørring, Danmark

2) Regionshospital Nordjylland, Center for Klinisk Forskning, Hjørring, Danmark

**Background:** Lack of ability in basic mobility skills is associated with increased mortality in patients with hip fractures.

The aim of this study was to identify predictors for performing basic mobility skills at discharge.

**Methods:** From June 2015 to May 2016, 235 consecutive patients (76% female, median age 85 (78-89 IQR)) with hip fractures admitted to the Department of Orthopaedic Surgery at North Denmark Regional Hospital were included. Basic mobility was assessed at discharge using the Cumulated Ambulation Score (CAS), which consists of 1) getting in and out of bed, 2) rising from a chair and 3) walking. Possible scores for each task is: unable (CAS=0), supported (CAS=1) or independent (CAS=2). A total score of 6 indicates independence in basic mobility. Inclusion was restricted to first time hip fractures and age  $\geq 65$ . Exclusion criteria were death during admission or unrecorded CAS at discharge.

**Results:** Before surgery 90.6% were independent in basic mobility (CAS=6). Getting out of bed at discharge: independently 37.5%, supported 56.5% and unable 6.0%. Rising from a chair: independently 49.8%, supported 43% and unable 7.2%. Walking: independently 43.8%, supported 38.3% and unable 17.9%. A total of 79 (33.6%) patients achieved independence in all tasks (CAS=6) at discharge.

Independence in: 1) getting in and out of bed, 2) rising from a chair, and 3) walking, respectively had significant association with advanced age, length of stay and Charlson Comorbidity Index  $>0$ . Medial fractures were associated with inability to rise from a chair

Advanced age was the only variable significantly associated with inability to perform each task of CAS. Dependent pre-fracture function was associated with inability to rise from a chair and walking. Delay of surgery  $> 48$  hours after admission was significantly associated with the inability to walk.

**Conclusion:** Elderly patients with comorbidities who were not independent in basic mobility before hip fracture are at risk of not being able to perform activities of basic mobility at discharge and should receive extra attention in rehabilitation.

#### Postergruppe C, torsdag 13.35-14.05, Fyn

## The Cumulated Ambulation Score as a predictor of mortality and readmission in 220 patients with hip fracture

Caspar Hansen (1), D Melgaard (2)

1) Regionshospitalet Nordjylland, Fysio- og Ergoterapien, Hjørring, Danmark

2) Regionshospitalet Nordjylland, Center for Klinisk Forskning, Hjørring, Danmark

**Background:** Poor functional status at discharge have been associated with increased mortality and readmission in patients with hip fractures. The aim of this study was to investigate whether independent performance or inability to perform the tasks of the Cumulated Ambulation Score (CAS) can predict mortality and/or readmission after hip fracture.

**Method:** From June 2015 to May 2016, 245 consecutive patients >65 years with first-time hip fracture were admitted to the Department of Orthopaedic Surgery at North Denmark Regional Hospital and were eligible for this observational study. Exclusion criteria were residence outside the North Denmark Region, death during admission at the orthopedic ward or unattained information regarding CAS at discharge. Functional status, (1) getting in and out of bed, (2) rising from a chair and (3) walking, was assessed at discharge using CAS. Possible scores for each task are: unable (CAS=0), supported (CAS=1) or independent (CAS=2). A total score of 6 indicating total independence and 0 indicating total inability. Outcome: mortality within 30 and 180 days after discharge and readmission within 30 days after discharge.

**Results:** A total of 220 patients  $\geq$  65 years (76% female, median age 85 (78-89 IQR)) were included. Before surgery 90.6% were independent in basic mobility (CAS=6). Getting out of bed at discharge: independently 36.8%, supported 56.8% and unable 6.4%. Rising from a chair: independently 49.6%, supported 42.7% and unable 7.7%. Walking: independently 43.2%, supported 39.1% and unable 17.7%.

Patients performing the tasks of CAS independently at discharge did not die within 30 days after discharge. Unable performances of the tasks of CAS at discharge are crude predictors of 30-days mortality.

Inability to perform the tasks of CAS and age >85 predicts 180-days mortality. No significant associations with 30-days readmission were found for independent performance or for being unable to perform the tasks of CAS.

**Conclusion:** Inability to perform the separate tasks of CAS predicts mortality in patients with hip fractures. Age >85 predicts 180-days mortality regardless of functional status

at discharge. Functional status at discharge does not predict 30-days readmission.

Postergruppe C, torsdag 13.35-14.05, Fyn

## Prevalence of Sarcopenia in a Danish geriatric out-patient population

Katrine Storm Piper (1), MG Christensen (2), R Dreier (3), C Suetta (3), HE Andersen (2)

1) Rigshospitalet Glostrup, Glostrup, Denmark

2) Amager og Hvidovre Hospital Medicinsk afdeling M i Glostrup Geriatrisk Sektion Afsnit MA 22, Glostrup, Denmark

3) Rigshospitalet, Københavns Universitet Klinik for Klinisk Fysiologi, Nuklearmedicin og PET, Glostrup, Denmark

**Introduction:** Using the European Working Group on Sarcopenia (EWGSOP) criterias on a geriatric outpatient-population the aim was to assess the prevalence of sarcopenia and to describe the association between sarcopenia and age, gender, body-mass index (BMI).

**Methods:** Patients referred to a geriatric outpatient-clinic were assessed and classified accordingly EWGSOPs recommendations. Assessment included Dual Energy X-ray absorptiometry (appendicular skeletal muscle mass (ASM)), Hand-grip strength (HGS), 10-meter Walk (GS). Cut-off points: Skeletal Muscle Mass Index (SMI)  $ASM/height^2$  (kg/m<sup>2</sup>). Cutoff men <7.23 kg/m<sup>2</sup>, women <5.67 kg/m<sup>2</sup>. HGS men <30 kg, women <20 kg, GS <0.8 m/s. Patients were classified: No sarcopenia (normal SMI), presarcopenia (reduced SMI, normal HGS and GS), sarcopenia (reduced SMI and reduced HGS or GS) or severe sarcopenia (reduced SMI, HGS and GS).

**Results:** 189 patients were screened for inclusion; 80 were included. 12 (15%) had severe sarcopenia, 9 (11%) had sarcopenia, 8 (10%) had presarcopenia and 51 (62%) did not have sarcopenia. Comparing the groups mean age was significantly higher in the sarcopenic group (sarcopenia and severe sarcopenia) than in the non sarcopenic group (presarcopenia and no sarcopenia), (p:0.009). The nutritional status was significantly poorer in the sarcopenic group (p: <0.001). No difference was found in gender distribution (p: 0.729)

**Conclusions:** Prevalence of sarcopenia was 26 % in our study highlighting that this condition is common in a geriatric

tric outpatient population. Assessment using the EWGSOP diagnostic method was feasible and is suggested to be part of the standard clinical comprehensive geriatric assessment.

**Postergruppe C, torsdag 13.35-14.05, Fyn**

## Exercise interventions for treating sarcopenia - a systematic review and meta-analysis of controlled trials

*Niklas Grundt Hansen (1), MB Stausholm (2,3), MT Kristensen (3,4)*

1) Ishøj Kommune, Vallensbæk, Danmark

2) Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway

3) Physical and Occupational Therapy Research Unit, Bispebjerg and Frederiksberg University Hospital., Copenhagen, Denmark

4) Physical Medicine and Rehabilitation Research - Copenhagen (PMR-C), Bergen, Norway

5) Departments of Physical Therapy and Orthopedic Surgery, Amager-Hvidovre Hospital, University of Copenhagen., Copenhagen, Denmark

**Introduction:** Sarcopenia is defined as a substantially loss of muscle mass along with a reduction of strength and functional ability. No consensus exists on how sarcopenia is best treated. The primary objective of this review was to estimate the effectiveness of exercise therapies for improving physical performance (e.g. gait speed and chair stand) in individuals with sarcopenia.

**Methods:** Four electronic databases (PubMed, Embase, CINAHL and CENTRAL) were systematically searched from inception to January 2016 to identify relevant randomized controlled trials and controlled trials. The reference lists of the included trials were additionally checked. Two reviewers independently evaluated the eligibility of trials and the included trial's methodological quality using the Cochrane risk of bias tool. Random effect meta-analyses were performed. The quality of evidence was evaluated using the approach by GRADE (the Grading of Recommendations Assessment, Development and Evaluation tool).

**Results:** Nineteen trials were included of which fourteen (653 participants) with exercise interventions versus control were meta-analyzed. Every overall effect estimate favored exercise over control, with the standard mean difference

(SMD) for objectively evaluated functional ability being 0.71 (95% CI: 0.52 to 0.91), 0.71 (95% CI: -0.3 to 0.72) for aerobic capacity, 0.53 (95% CI: 0.27 to 0.79) for muscle strength, while the SMD for muscle mass was 0.22 (95% CI: 0.02 to 0.43).

**Conclusion:** Low quality evidence indicates that exercise therapy is a moderately effective intervention, in terms of objectively measured physical performance, for treating individuals with sarcopenia. Low, very low and low quality evidence show that exercise therapy has a moderate, moderate and small benefit on, aerobic capacity, muscle strength and muscle mass, respectively, in the sarcopenic population. Risk of bias and small sample sizes in the included trials prohibits a strong conclusion.

### Reference:

PROSPERO protocol: CRD42016033365

**Postergruppe C, torsdag 13.35-14.05, Fyn**

## Is a biopsychosocial guideline useful as a decision tool selecting neck patients for group-based intervention? A case-control study

*Bibi Heiberg (1), U Nissen (1), L Morsø (2)*

1) Rygcenter Syddanmark, Middelfart, Danmark

2) Center for Kvalitet, Region Syddanmark, Middelfart, Danmark

**Objective:** Neck pain is a widespread and common musculoskeletal disorder in the western world. Guidelines have been developed worldwide in an attempt to optimize treatment strategies, but the implementation of guidelines are often challenging. In 2010, the Spine Centre of Southern Denmark (SCD) made an internal guide focusing on neck patients. The purpose of the guideline was to introduce a decision tool targeting relevant treatment combining patient questionnaires regarding psycho-social issues and clinical presentation.

The aim of this study was to investigate whether an internal guide did succeed in selecting the intended patients for group-based intervention. Furthermore, we evaluated the feasibility of a group-based intervention for neck patients in a secondary care setting.

**Methods:** In this case-control quality improvement study

we included neck patients with non-specific neck pain. Cases were compared to 100 controls selected prior to the inclusion period. The intervention focused on neck specific and activity directed exercises, physical activity and education with a cognitive approach. By looking at demographic data and self reported measures including NDI, duration and pain we compared cases to controls. Feasibility was evaluated by analyzing attendance and satisfaction.

**Results:** Eighty nine neck patients completed the group-based intervention (completion rate of 81,2%) and were included in the study. We found no statistical significant differences between neck patients selected for group-based intervention and neck patients assessed and treated individually at the Spine Centre, on any of the self-reported outcome measures, pain or duration. The intervention patients had high degrees of attendance and expressed satisfaction and readiness to precede physical exercises subsequent.

**Conclusion:** The lack of significant difference between neck patients selected for group-based intervention and neck patients treated individually indicate that the proposed guide did not succeed in selecting the intended patients for group-based intervention. Including other factors than yellow flags, duration, level of pain and limitation of activity, in the decision process to offer neck patients group-based intervention might be worth considering. However, group-based intervention including neck specific and activity directed exercises, pain and behavioral education and general physical activity seems feasible for neck patients referred to the secondary care SCD.

**Postergruppe D, torsdag 13.35-14.05, lokale 24**

## Cognitive functional therapy for the management of a 36 y/o female with persistent back pain and Modic change type 1

*Kasper Ussing (1), P Kjær (2), P O'Sullivan (3)*

*1) Rygcenter Syddanmark, Middelfart, Fyn, Danmark*

*2) Syddansk Universitet, Odense, Fyn, Danmark*

*3) Curtin University, Perth, Western Australia, Australia*

**Persistent low back** pain continues to challenge the health care system. It is widely accepted that various interacting bio-psycho-social risk factors have the potential to influence low back pain. These factors include: structural factors (eg.

Modic changes), cognitive factors (e.g. negative beliefs, fear of movement and poor coping strategies. Emotional factors (stress, anxiety, depression), social factors (family stress and low job satisfaction), neurophysiological factors (impaired pain modulation and altered body perception), physical behaviors (avoidance, maladaptive movement patterns and pain behaviors) and lifestyle factors (sleep deficit, obesity, smoking, inactivity and sedentary behavior). Recently, Modic changes type 1 have been reported to be strongly associated with low back pain and resistant to care, leading to speculation with regards to its best management..

**Purpose:** The purpose of this case is to describe and to discuss the management of a 36-year-old female with persistent low back pain and Modic changes type 1 and severe disc degeneration within a multidimensional, person centered framework, using cognitive functional therapy (CFT).

**Methods:** This is a single case study with twenty months follow-up. The baseline and follow-up measures included: Pain intensity, Roland Morris Disability Questionnaire, patient satisfaction and general health as well as validated screening questions for: anxiety, depression, fear of movement and catastrophizing. The CFT intervention was delivered during four individualized sessions over a period of eight weeks and targeted unhelpful beliefs, fear, distress, protective and avoidant functional behaviors and lifestyle factors.

**Results:** The patient's pain intensity reduced from 5/10 to 1/10 and disability from 43% to 0% at 20 months. Furthermore, at the same time-point, a substantial reduction in fear of movement (6/10 to 0/10) and anxiety (8/10 to 0/10) was observed as well as improvement in general health from 50/100 to 90/100.

**Conclusion:** This case highlights the application of a person-centered cognitive functional approach to management of low back pain associated with Modic changes, where previous interventions had failed. The case proposes an alternative model for managing these disabling disorders. Larger case series and randomized trials are needed to further investigate the efficacy of cognitive functional therapy for chronic low back pain and Modic changes.

**Postergruppe D, torsdag 13.35-14.05, lokale 24**

## Running biomechanics changed after 4 weeks running with increased running step rate

*Mathias Ørum Helledie, PB Iversen, T Mohr, K Lenz, MP Støve, LH Larsen*  
UCN Department of Physiotherapy, Aalborg, Danmark

**Background:** The prevalence of recreational running related injuries (RRI) is high. Vertical load has been hypothesized important in RRI and previous studies showed decreased maximal vertical reaction force (MVRF) by increased step rate (cadence), but it is unknown if runners are able to maintain increased cadence in a longer term.

**Objective:** To compare cadence, MVRF and gluteal and lower leg muscle activity running with self-selected cadence and immediately after and 4 weeks after running training with 10% higher cadence than baseline self-selected.

**Methods:** 16 injury-free recreational runners ( $24 \pm 3$  years) completed baseline and 10% increased cadence running trials on an instrumented treadmill (synchronized Zebris<sup>TM</sup> and Noraxon<sup>TM</sup> systems). A follow-up trial was completed after 4 weeks of targeted running training at least twice a week with sustained 10% increased cadence, monitored by a mobile application/accelerometer system (Setio<sup>TM</sup>). During all 3 trials, the muscle activity was recorded from the Tibialis anterior (TA), Gastrocnemius Lateralis (GL) and Gluteus Maximus (GM) muscles with surface-EMG and foot-pressure was recorded from pressure-sensors. Muscle activity was calculated as mean of peak Root-mean-square EMG across each trial and MVRF and cadence was calculated from pressure-sensor data. Repeated measures ANOVA and post-hoc t-tests were used to statistically compare data between trials.

**Results:** 4 weeks targeted training resulted in increased cadence ( $P < 0.01$ ) and decreased MVRF ( $P < 0.01$ ). During late swing, the muscle activity increased in GM and GL ( $P < 0.01$ ) and decreased in TA ( $p < 0.05$ ).

**Conclusion:** Targeted running training supported by mobile application successfully increased the cadence. It remains unknown if this change is longer lasting, but changes in the biomechanical parameters indicated changed absorption strategies including decreased peak forces and changed movement strategies with changed muscle activity in selected lower extremity muscles. More research is required to explore the long-term impact on running related injuries.

**Implications:** Mobile application systems and low-cost sensors may be a tool to support and monitor changes in running cadence and biomechanics but further research to support the underlying strategies should be explored in prospective studies with larger cohorts.

**Acknowledgement:** The study was supported by University College of Northern Denmark, Department of Physiotherapy.

Postergruppe D, torsdag 13.35-14.05, lokale 24

## Experimental study: the impact of a novel wheelchair driving device on shoulder muscle activity during forward and reverse wheelchair propulsion

*Stine Lund Bjerringgaard, MM Nielsen, LH Larsen*  
UCN Department of Physiotherapy, Aalborg, Danmark

**Introduction:** Manual wheelchair propulsion is the major strategy to increase independent mobility in many disabled persons. Conventional wheelchairs are propelled by application of force to a hand rim, but this a demanding task resulting in high incidence and recurrence of shoulder and neck pain. Muscle fatigue and biomechanics during high repetitive load is hypothesized a major role, although the underlying mechanisms remain uncertain (1).

A novel device was developed to allow propelling of a wheelchair forward by pushing as well as pulling and the study aimed to compare the shoulder muscle activity between these two tasks.

**Methods:** 20 healthy young participants completed two series of 20 seated wheelchair propulsions by pulling and pushing a wheelchair attached to a rig designed for the experiment after completing maximal voluntary contraction tests (MVC). The participants were randomized to begin with pushing or pulling series of 20 propulsions with 3 minutes break between series. The muscle activity was measured with a synchronized Noraxon<sup>TM</sup> wireless surface electromyography (EMG) and video system. EMG was collected from 9 muscles (Biceps and Triceps Brachii, Deltoideus (anterior/medial/posterior), Trapezius (pars descendens and transversus), Latissimus Dorsi and Pectoralis Major) and propulsions phases were detected from video recordings. Mean and peak Root-mean-Square EMG (RMS-EMG) normalized to MVC was calculated. The two groups were



pooled since no difference existed between their RMS-EMG that was compared between the two tasks using repeated measures ANOVA tests and post-hoc t-tests.

**Results:** All 9 muscles showed differences between the two tasks in mean  $P < 0.001$  and peak  $P < 0.001$  RMS-EMG.

**Conclusion:** Significant differences in shoulder muscle activity between reverse and forward wheelchair propelling indicated that the use of a novel device to change the direction of wheelchair propelling could contribute to a variable load distribution. The changes in the muscle activity may decrease the risk of overload, but more research is needed to explore the long-term impact on shoulder and neck pain in wheelchair drivers.

**Acknowledgement:** The study was supported by University College of Northern Denmark, Department of Physiotherapy.

**Reference:**

1 Jain, NB. et al 2010. Association of Shoulder Pain With the Use of Mobility Devices. *PM&R* 2(10):896-900

**Postergruppe D, torsdag 13.35-14.05, lokale 24**

## Acute experimental back pain does not affect lumbar movement variability in healthy or currently asymptomatic recurrent low back pain patients

*Kate Buch Andersen, AL Stoustrup, C Olsen, LH Larsen  
UCN Department of Physiotherapy, Aalborg, Danmark*

**Background:** Low back pain (LBP) is the most common musculoskeletal reason of disability globally (1). Many factors are suggested to play a role in LBP including kinesiophobia. Decreased movement variability has been suggested to reflect kinesiophobia and increase the risk of sustainment of LBP, but it remains uncertain if acute pain influence the lumbar movement variability during gait.

**Objective:** To examine the influence of bilateral experimental saline-induced LBP on the variability of lumbopelvic kinematics in the frontal movement plane during gait.

**Methods:** 13 healthy and 14 currently asymptomatic recurrent LBP patients (R-LBP) completed an Örebro Musculoskeletal Pain Questionnaire (ÖMPSQ) and Tampa Scale for

Kinesiophobia (TSK). Participants walked at self-selected pace on a treadmill (Zebris FDM-TTM) before and after bilateral injection of hypertonic saline into m. longissimus at L2 level. Experimental pain intensity was recorded by verbal Numeric Rating Scale (NRS) during gait and 3-dimensional kinematic data were recorded with an active skin marker system (CODATM). Mean NRS and mean variability of frontal plane lumbopelvic movements across all steps during each trial were calculated and compared between controls and R-LBP patients and between baseline and pain conditions within each group.

**Results:** The R-LBP group displayed high risk of long-term disability (ÖMPSQ score  $111 \pm 14.11$ ) and mild levels of kinesiophobia (TSK score  $26 \pm 2.91$ ). There were no significant differences in variability during gait within or between groups before or during experimental pain ( $P > 0.1$ ) although peak NRS was higher in the LBP group ( $5.38 \pm 1.8$ ) compared with the control group ( $4.79 \pm 2.48$ ,  $P < 0.04$ ).

**Conclusion:** Bilateral experimental pain resulted in higher peak pain intensity in patients compared with controls but had no impact on frontal plane kinematics during gait.

**Implications:** Variability in lumbar movement patterns during gait in R-LBP patients is not influenced by previous incidences of LBP or acute pain. Subjective fear of movement may play a role in other functions but more research is needed.

**Acknowledgement:** The study was supported by University College of Northern Denmark, Department of Physiotherapy.

**References:**

Storheim K, Zwart J., 2014. Musculoskeletal disorders and the Global Burden of Disease study. *Annals of the Rheumatic Diseases* 73:949-50

**Postergruppe D, torsdag 13.35-14.05, lokale 24**

## 7 versus 12 weeks of exercise in hospital based COPD rehabilitation. Does it make a difference?

Jannie Rhod Bloch-Nielsen

Regionshospital Silkeborg, Medicinsk Fysioterapi, Silkeborg, Danmark

**Background:** In the Danish guidelines for COPD rehabilitation, the exercise recommendations are primarily based on studies using interventions lasting minimum 10 weeks. Furthermore, patients with COPD often have cognitive problems, requiring an intervention of a longer duration to facilitate life style changes including exercise habits. The aim of this study was to investigate whether increasing the duration of a COPD rehabilitation program from 7 to 12 weeks would correspondingly increase the effect.

**Materials and Methods:** The study is a before-after study with 3 months follow-up. All patients participating in the COPD rehabilitation program at Regional Hospital Silkeborg in the period May 2015 to October 2016 were included. The effect was assessed using the Endurance Shuttle Walk Test (ESWT), the sit-to-stand test (STA), the COPD Assessment Scale (CAT) and the Canadian Occupational Performance Measure (COPM). The outcomes were measured before and after the rehabilitation program, and 3 months after termination of the rehabilitation program.

**Results:** 23 patients were included in the 7-week group and 27 in the 12-week group. Both groups improved significantly on all the measured outcomes from pre- to post rehabilitation, with no differences between the two groups. At the three month follow-up this improvement was no longer significant, except for the COPM, and there were no differences between the two groups on any outcomes.

**Conclusion:** Prolonging our COPD rehabilitation program from 7 to 12 weeks, did not improve the effect significantly in terms of physical capacity and muscle strength, and neither did the effect last longer. Only on the COPM did the two groups maintain their improvement, but again there was no difference between groups. Based on these findings we did not find reason to maintain the prolonged program.

Postergruppe E, torsdag 13.35-14.05, lokale 26

## Barriers and motivational factors towards physical activity in COPD - an interview based pilot-study

Elisabeth Bomholt Østergaard (1), SS Sriitharan (2), PM Thomsen (3), AD Kristiansen (4), A Løkke (5)

1) VIA University College, Fysioterapeutuddannelsen, Aarhus, Danmark

2) Aarhus Universitetshospital, Lungemedicinsk Afdeling, Aarhus, Danmark

3) Lokalcenter Møllestien, Sundhed og Omsorg, Aarhus, Danmark

4) Hjørring Kommune, Træningsenheden, Hjørring, Danmark

5) Aarhus Universitetshospital, Lungemedicinsk Afdeling, Aarhus, Danmark

**Background:** Surprisingly few people in Denmark with Chronic Obstructive Pulmonary Disease (COPD) engage in physical activity even though it is evident that pulmonary rehabilitation has positive effects on activity level, dyspnea, anxiety, fatigue and quality of life.

**Aims:** To explore why people with COPD do not engage in physical activity and their motivational factors for being physically active.

**Methods:** Fieldwork among five people with COPD in Jutland, Denmark 2013-2016 using qualitative semi-structured interviews. Supplementary short semistructured interviews with three general practitioners, and participation in a closed Facebook-group for people with COPD.

**Results:** Preliminary findings reveal that one main reason for not being physical active before rather late in the course of COPD was that people with COPD did not receive the necessary information from the general practitioners about the benefits of physical training neither the negative consequences of an inactive lifestyle.

Motivational factors for living a physically active life were first of all information about COPD and the benefits of physical training, secondly to experience the benefits on one's own body ("I get more energy when I train"). Other motivational factors were to experience that it was not dangerous to feel breathless and to have success coping with breathlessness.

Functional tests were very important for persons with COPD because they showed the positive progress and were much easier to comprehend than spirometry tests.

**Conclusion:** It is of paramount importance that people with COPD, first of all and as early as possible receive information about the benefits of physical activity, and secondly expe-

rience the benefits of physical training on their own body. Physical training moves mountains in COPD.

**Funding:** The study was funded by VIA University College, Faculty of Health Sciences.

**Trial Registration:** Our work was approved by: The Central Denmark Region Committee on Biomedical Research Ethics, Skottenborg 26, Postboks 21, DK-8800 Viborg, Denmark.

**Postergruppe E, torsdag 13.35-14.05, lokale 26**

## Maximal inspiratory pressure in patients with COPD

*Linette Marie Kofod (1), N Godtfredsen (2), T Hage (3), LH Christiansen (3), K Skalkam (3), G Martinez (1,2), S Mølsted (3,4)*

1) Hvidovre Hospital, Fysio- og Ergoterapeutisk Afdeling, Hvidovre, Danmark

2) Hvidovre Hospital, Lungemedicinsk Afdeling, Hvidovre, Danmark

3) Nordsjællands Hospital, Ergo- og Fysioterapifdelingen, Frederikssund og Hillerød, Danmark

4) Nordsjællands Hospital, Forskningsafdelingen, Hillerød, Danmark

**Introduction:** Decreased capacity of the respiratory muscles in patients with chronic obstructive pulmonary disease (COPD) is a known consequence of the disease. A low Maximal Inspiratory Pressure (MIP) is associated with increased morbidity.

**Objective:** to examine MIP in patients with COPD who receive pulmonary rehabilitation (PR) in a hospital setting, and compare the data with gender and age matched reference values.

**Methods:** Patients with severe COPD ( $FEV_1/FVC < 0.7$  and  $FEV_1\%pred. < 50\%$ ) from Hvidovre and Nordsjællands Hospital were included in the study. Before PR MIP was tested using the PowerBreathe KH2 device. In addition, max knee-extension was measured with a dynamometer, and 6 min-walk, CAT, MRC and spirometry were assessed.

**Results:** 97 patients were included (39 men, 58 women, aged (mean $\pm$ SD) 70 $\pm$ 9 years,  $FEV_1\% pred. 35\pm 10$ ). The mean MIP was 63 (CI 95% 59;67) cm H<sub>2</sub>O and matched reference values were 76 (73;79) cm H<sub>2</sub>O ( $p < 0.001$ ). 39% had low MIP

(< 60 cm H<sub>2</sub>O) and 7% were below the lower limit of normal. 76% performed the test with values varying less than 10 cm H<sub>2</sub>O. When data were adjusted for age and gender in linear regression analyses, MIP was associated with  $FEV_1\%pred.$  and either 6 min-walk ( $\beta$  0.05, CI 95% 0.01-0.09,  $p=0.013$ ) or max knee-extension ( $\beta$  0.2, CI 95% 0.1-0.3,  $p=0.001$ ), but not with CAT or MRC.

**Conclusion:** Mean MIP was significantly reduced in patients with COPD compared to an age and gender matched reference. MIP was not associated with self-reported health and symptoms. Even though an association was found between quadriceps strength and inspiratory muscle strength other and unknown factors affect MIP. To determine the inspiratory muscle strength in a patient with COPD, it is necessary to measure MIP.

**Postergruppe E, torsdag 13.35-14.05, lokale 26**

## Dysfunctional breathing – extent of screening and treatment in Denmark 2016; an exploratory survey

*Karen Hjerrild Andreasson (1,2,3), ST Skou (1,4), U Bødtger (2,3,5)*

1) Department of Physiotherapy and Occupational Therapy, Naestved-Slagelse-Ringsted Hospitals, Region Zealand, Naestved, Denmark

2) Department of Pulmonology, Naestved Hospital, Region Zealand, Naestved, Denmark

3) Institute of Regional Health Research, University of Southern Denmark, Odense, Denmark

4) Research Unit for Musculoskeletal Function and Physiotherapy, Institute of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark

5) Department of Pulmonology, University Hospital Region Zealand, Roskilde, Denmark

**Background:** Dysfunctional breathing (DB) is an identified cause of dyspnoea. DB is defined as biomechanical alterations of the breathing pattern, without an inflammatory component. No medical therapy is available. The only therapy supported by some evidence is targeted physiotherapy, however high-quality trials are missing.

Little is known about current DB screening and treatment practice in Denmark. Furthermore, major co-morbidities associated with DB are also unknown.

**Materials & Methods:** A cross-sectional survey was conducted between 16th of May and 10th of June 2016. Invited respondents were pulmonologists from all asthma centres (outpatient departments) from the five regions of Denmark. After up to three e-mail reminders 15 (75%) out of the 20 invited respondents had answered. The electronic questionnaire encompassed screening of DB (frequency, habits/standards, tools, professions), treatment for DB (professions, type) and co-morbidities observed in patients with DB (pulmonary, other). Data was analysed to investigate frequencies.

**Results:** A range of screening methods were applied in 11 of the centres: Clinical observation (6/11), Nijmegen Questionnaire (3/11), Borg CR10 (2/11), Baseline Dyspnoea Index/Transition Dyspnoea Index (1/11), and arterial blood gas (1/11). The pulmonologist screened independently in 5 out of 11 centres, while multidisciplinary screening by up to three professions (pulmonologist, nurse, physiotherapist, speech therapist) was performed in 5/11. One referred patients to another hospital for screening.

Treatment was provided in 7 centres but only systematically in 5: physiotherapy (5/7), treatment by pulmonologist (4/7), and speech therapy (2/7). Multimodal treatment was used in 4.

Major associated co-morbidities reported were asthma (10/11), chronic obstructive lung disease (6/11), psychological/psychiatric disease (10/11), musculoskeletal disease (8/11).

**Conclusions:** Current Danish DB screening and treatment is heterogeneous. Only half of the asthma centres in Denmark treat DB. Both pulmonary and non-pulmonary co-morbidities are typical.

**Perspectives:** Evidence on the effects from a standardised physiotherapy, including respiration modification and exercises, is needed before implementation. A large, multicentre trial will take place in 2017-18 in Denmark.

#### Postergruppe E, torsdag 13.35-14.05, lokale 26

## Evaluering af opgaven at etablere og gennemføre et interventionsstudie som tværregionalt multicenter-RCT

*Karen Hjerrild Andreasson (1,2,3), ST Skou (1,4), P Sivapalan (5,6), JV Eklöf (5,6), M Thomas (7), U Bødtger (2,3,8)*

*1) Afdeling for Fysioterapi og Ergoterapi,*

*Næstved-Slagelse-Ringsted Sygehuse, Region Sjælland, Næstved, Danmark*

*2) Lungemedicinsk Afdeling, Næstved-Slagelse-Ringsted Sygehuse, Region Sjælland, Næstved, Danmark*

*3) Institut for Regional Sundhedsforskning, Syddansk Universitet, Odense, Danmark*

*4) Research Unit for Musculoskeletal Function and Physiotherapy, University of Southern Denmark, Odense, Danmark*

*5) Medicinsk Afdeling, Herlev og Gentofte Hospital, Hellerup, Danmark*

*6) Det Sundhedsvidenskabelige Fakultet, Københavns Universitet, København, Danmark*

*7) Primary Care Research, University of Southampton, Southampton, United Kingdom*

*8) Lungemedicinsk Afdeling, Sjællands Universitets Hospital, Roskilde, Danmark*

**Baggrund:** Under protokolarbejdet forud for forskningsprojekt om astma og fysioterapi viste vores styrkeberegning på den hidtil fundne forskel i effekt og standarddeviationen, at den lokale studiepopulation var for lille til at vi ville kunne udlede et signifikant resultat. Derfor måtte vi vælge multicenterdesign, hvilket dog stiller store krav til etablering og gennemførelse af projektet.

**Evalueringens formål:** At beskrive og forstå de særlige udfordringer der er ved et tværregionalt multicenter randomiseret klinisk forsøgs (RCT)-design af et fysioterapeutisk interventionsstudie og hvilke perspektiver dette giver.

**Metode:** I evalueringen er anvendt 'feltobservation' på processen, refleksion, metodelitteratur samt drøftelser med vejledere, projektmedarbejdere og tværfaglige forskningsaktive kolleger for at konkretisere udfordringerne.

**Resultat:** Der er en betydelig diversitet, som projektleder skal håndtere, når et RCT involverer flere geografisk spredte afdelinger med hver sine unikke forhold. Desuden er volumen i sig selv en udfordring.

For at sikre et smidigt forløb i studiet, og et så ensartet 'produkt' som muligt, er det essentielt, at man som projektleder forholder sig til de særlige udfordringer ved:

- finansiering af mange ansatte og megen befordring,

- rekruttering og interesse-fastholdelse af centre, som ikke 'ejer' projektet,
- ansættelse og aflønning af projektmedarbejdere (kolliderende HR-krav),
- at sikre at deltagerrekruttering, effektmåling og fysioterapi-intervention er standardiseret på tværs af centre,
- lokale tilpasninger af deltagerinformation og anden formidling i studiet,
- it over regionsgrænser og
- at projektleder skal være tilgængelig og fysisk tilstede i hver center.

**Konklusion:** Det tværregionale multicenter-RCT-design giver organisatoriske udfordringer og stiller krav til at håndtere diversiteten og barrierer. Der er meget praktisk arbejde, som dog altid har det overordnede mål at sikre et metodisk velgennemført forskningsprojekt.

Selvom hvert studie har unikke vilkår, er der universelle behov i dette design. Derfor kan andres erfaringer inspirere til løsninger. Vi ønsker at formidle denne inspiration til fremtidige studier, så de umiddelbare styrker ved multicenter-RCT får optimale vilkår og vi producerer evidens af høj kvalitet i Danmark.

**Perspektiv:** Styrken i et tværregionalt multicenter-RCT er dels at intervention er afprøvet i flere miljøer (afdelinger) og på patienter med forskellig sociodemografi, hvilket gør studieresultatet mere generaliserbart, dels at vi har gjort erfaringer med at implementere interventionen (hvis den viser sig virksom).

**Postergruppe E, torsdag 13.35-14.05, lokale 26**

## L.A.K.S Lige Adgang i Kommunale Sundhedsydelser

*Charlotte Petersen*

*Holbæk Kommune, Holbæk, Danmark*

**Baggrund:** Sårbare og ressourcetsvage borgere deltager ofte mindre aktivt og mindre initiativrigt i træningstilbud sammenlignet med ressourcestærke borgere. Terapeuter oplever ofte udfordringer i arbejdet med borgere, som har andre udfordringer livet end den diagnose, de er henvist til træning for, men som har betydning for resultatet af et træningsforløb. Udviklingsprojektet har fokus på at fremme lige adgang til kommunale tilbud, hvor den lige adgang først er opnået, når sårbare/ressourcetsvage borgere er hjulpet gennem sundhedssystemet og har fået tilbudt relevante eksisterende tiltag.

**Formål:** At forbedre den sociale ulighed i sundhed ved at skabe bedre og mere helhedsorienterede løsninger til borgere med multi-diagnoser, og/eller sociale udfordringer, og deraf komplekse sundhedsmæssige problemstillinger. Det forudsætter 1) at vi som professionelle terapeuter får afdækket borgerens problemstillinger, behov og ressourcer ved en helhedsorienteret tilgang, 2) at vi kender til kommunens tilbud og til henvisningsprocedurer.

**Metode:** Der er, i samarbejde med COWI, anvendt aktionslæring som metode. Tiltag og værktøjer, til at opnå formålet, er løbende udviklet, afprøvet, evalueret og ændret i processen. Sideløbende, med udvikling af screeningsværktøj til opsporing, har der været fokus på kompetenceudvikling og videndeling i terapeutgruppen. Borgere har været inddraget i processen ved afprøvning af interviewredskab samt ved evaluering af oplevelsen af en helhedsorienteret tilgang.

**Resultater:** Terapeuterne opsporer hurtigere sårbare borgere via en formaliseret sundhedsdialog med brug af screeningsredskab, og borgere får et bedre tilbud grundet øget kendskab og henvisning til supplerende tiltag. De øgede kompetencer og viden hos terapeuterne har givet større indsigt i, samt fokus på, egne muligheder og begrænsninger i samarbejdet med borgeren. Terapeuterne tør således i højere grad tage de svære samtale med borgere med komplekse problemstillinger.

**Konklusion:** Udviklingsprojektet har medført ændrede arbejdsgange i forhold til en mere helhedsorienteret tilgang, ligesom projektet har skabt overblik over tilbud i kommunen, som betyder lettere adgang til supplerende tiltag. Dette skaber mere lighed i forløb for borgere med komplekse problemstillinger. Der udvikles løbende på værktøjer og viden ved evaluering og dialog med borgere, terapeuter og andre samarbejdspartnere i kommunen. Aktionslæring som metode har været givtig og kan overføres til lignende udviklingsprojekter på stedet.

**Postergruppe F, torsdag 13.35-14.05, lokale 7-8**

## Patientinddragelse i udarbejdelsen af genoptræningsplaner. Forventninger hos patienter og refleksioner blandt terapeuter

*Vivi Toftegaard Pedersen, TJ Pedersen*

*Rehabiliteringsafdelingen, OUH Svendborg Sygehus, Svendborg, Danmark*

**Baggrund:** I vejledningen om træning i kommuner og regioner, udgivet af Ministeriet for Sundhed og Forebyggelse, står bl.a.:

"Genoptræningsplanen skal udarbejdes i samarbejde med patienten" og "...inddragelsen har betydning for en realistisk beskrivelse af patientens genoptræningsbehov under hensyntagen til patientens ressourcer, motivation og ønsker."

I Rehabiliteringsafdelingen på OUH-Svendborg Sygehus har der været en oplevelse af, at det var forskelligt hvordan inddragelsen af patienterne blev praktiseret.

Derfor besluttede afdelingen i 2016 at iværksætte en undersøgelse af patienters oplevelse af- og forventninger til inddragelse i udarbejdelsen af genoptræningsplanen.

Derudover skulle det undersøges hvad afdelingens ergo- og fysioterapeuter forstod ved "inddragelse i udarbejdelsen af genoptræningsplanen", og der skulle initieres refleksioner blandt terapeuterne, baseret på patienternes forventninger og sædvanlig praksis.

**Metode:** Interviews med 15 patienter fra Svendborg kommune, der 3-4 uger før interviewet var blevet udskrevet med en almen genoptræningsplan. Interviewet foregik i patientens eget hjem.

Refleksioner på dialogmøder i de tre etablerede grupper af ergo- og fysioterapeuter på OUH Svendborg Sygehus. Intentionen var, at initiere hvad Steen Wackerhausen betegner som "sædvane-udfordrende" refleksion .

**Resultater:** Patienterne har ikke forventninger om andet end at blive henvist videre til fortsat kommunal genoptræning efter udskrivelsen, og at de kan komme med enkelte ønsker, f.eks. hvor og hvornår den fortsatte træning skal forgå.

Patienterne har under indlæggelsen, der ofte er præget af accelererede forløb, med mange samtidige indsatser, svært ved at overskue tiden efter udskrivelsen. Mange oplever, at den vigtigste inddragelse sker ved visitationen til kommunal genoptræning.

Ergo- og fysioterapeuterne på sygehuset oplever at have "et handle-ansvar". Da det kan være svært at vurdere, om der bliver et genoptræningsbehov efter udskrivelsen, så udarbejdes genoptræningsplanen ofte for at sikre, at patienten ikke bliver tabt i systemet.

Genoptræningsplanen opleves primært som et henvisende samarbejdsredskab mellem sygehuset og kommunen.

**Perspektivering:** Udviklingen på sygehusene, med accelererede patientforløb og øget ambulant aktivitet, samt i kommunerne med øget fokus på hverdagsrehabilitering, afstedkommer overvejelser om, hvorvidt tiden er ved at løbe fra den hidtidige praksis vedrørende genoptræningsplaner.

Spørgsmålet er, om tiden ikke er moden til at bløde op på opgavevaretagelsen i sektorovergangen.

## Evaluering af LIVA – en digital platform til borgere med livsstilsygdomme – en Model for Assessment of Telemedicine (MAST) evaluering

*Trine Knudsen, Fredericia Kommune, Fredericia, Danmark*

**Formål:** Formålet med studiet er, at evaluere den telemedicinske løsning LIVA til borgere med type 2 diabetes. Evalueringen foretages med udgangspunkt i MAST, der indeholder en evaluering af sikkerheden, den kliniske effekt, borgerperspektivet, økonomien og det organisatoriske aspekt.

**Metode:** Den kliniske effekt vurderes på vægttab og fysisk aktivitetsniveau, målt ved antal skridt per dag. Vægttab undersøges på 49 borgere og skridtændring på 9 borgere, parametriske statistik anvendes. Sammenhæng mellem vægttab og relevante parametre undersøges ved regressionsanalyser. Fokusgruppeinterview samt individuelle interviews anvendes til vurdering af borgernes perspektiver samt de organisatoriske aspekter. Økonomien vurderes ud fra beregninger på udgifter til anvendelsen af LIVA.

**Resultater:** Der findes et statistisk signifikant vægttab på 2% (1,93 kg), når der ses på alle deltagere (n=49). Kvinderne taber sig mere end mændene, men forskellen er ikke statistisk signifikant. Der påvises en klinisk relevant og statistisk signifikant sammenhæng mellem vægttabet og startvægten på 0,080 kg, svarende til 4% af gennemsnitsvægten. Skridtændringen findes statistisk signifikant på 3009 skridt/dag efter LIVA (n=9).

Relationen mellem borger og vejleder, den digitale vejledning og selvmonitorering samt motivation er sammen med opbakning afgørende aspekter for at lykkes med livsstilsændringen. Organisationen i form af f.eks. arbejdsopgaver ser ud til at have betydning for effektiviteten i LIVA.

**Konklusion:** LIVA ser ud til at kunne støtte borgere med type 2 diabetes til livsstilsændringer i form af vægttab og øget fysisk aktivitet, målt på antal skridt per dag. Selvmonitorering og digital vejledning som støtte til livsstilsændringer hos borgere med type 2 diabetes kan foregå sikkert, borgere og medarbejdere er tilfredse med teknologiens funktioner og brugervenlighed og det er muligt at implementere LIVA i en kommunal kontekst. En endelig konklusion på den kliniske effekt kræver et større datagrundlag og en mere repræsentativ målgruppe, og vurdering af de økonomiske aspekter kræver et længere tidsperspektiv.

**Nøgleord:** Telemedicin, MAST-evaluering, type 2 diabetes, vægttab, fysisk aktivitet

## Kvalitetsudvikling i kommunal rehabilitering til borgere med lænderygsmærter – et tværsektorielt evalueringsprojekt

*Maria Yoo Jin Jacobsen (1), L Morsø (2)*

1) Syddjurs Kommune, Arbejde Genoptræning Sundhed, Ebeltoft, Danmark

2) Region Syddanmark, Center for Kvalitet, Middelfart, Danmark

**Baggrund:** På baggrund af regionalt forløbsprogram for lænderygsmærter har Syddjurs Kommunes træningsenhed AGS/Arbejde-Genoptræning-Sundhed løbende udviklet deres lænderyg rehabiliteringsindsats. Efterfølgende ønskes evaluering af indsatsen. I 2016 blev der udført undersøgelser gennem et tværsektorielt projekt i samarbejde mellem CFK/Center For Kvalitet og Syddjurs Kommune. Evalueringen undersøgte udviklingsarbejdet og implementeringen af forløbsprogrammet.

**Formål:** Formålet med evalueringen var primært at forbedre udviklingsarbejdet, skabe læring, samt undersøge om intentionen bag rehabiliteringsindsatsen svarede til den daglige indsats. Desuden at vurdere hvordan indsatsen opleves af patienterne.

**Metode:** Evalueringsdesignet kombinerede kvalitative og kvantitative datakilder for at afdække formålet. Evalueringen blev foretaget på baggrund af 4 datakilder.

I en workshop faciliteret af CFK udviklede fokusgruppen/udviklingsteamet og ledelsen en indsats teori. Denne skulle sammenholdes med praksis. Gennem fokusgruppeinterview med de udførende terapeuter blev der undersøgt om praksis svarede til indsats teorien.

Registerdata på ventetider, gennemførelsesprocent, antal forløbsplaner, graden af udfyldte spørgeskemaer, graden af målopfyldelse, patientrapporterede parametre blev anvendt mht. at undersøge implementeringen af indsatsen.

PRO blev undersøgt gennem patientinterviews i et sideløbende kandidatspeciale, der undersøgte hvordan patienterne oplevede indsatsen.

**Resultater:** Kommunen havde iværksat aktiviteter, som indsats teorien beskrev havde følgende virkning:

”Smertehåndtering og graderet træning -> mestring -> funktionsbedring -> øget arbejdstilknytning”

Fokusgruppeinterview fandt at det angivne formål i indsats teorien omkring øget arbejdstilknytning, ikke var i fokus hos terapeuterne, de angav målsætningsarbejde på kortere sigt.

Interviewet fandt en del variation i det eksterne sam-

arbejde. Dette kan have indvirkning på, om borgeren oplever forløbet som enstrengt og koordineret.

PRO data viste oplevelse af overensstemmelse mellem målsætninger, forventninger og ønsker til indsatsen. Patienterne angav et positivt udbytte af rehabiliteringen, dette svarede til de kvantitative målinger. Der blev registreret en signifikant forbedring i funktion og smerte målt på RMQ og VAS.

**Konklusion:** Der anbefales at kommunen i sit kvalitetsudviklingsarbejde har fokus på løbende evalueringer og udarbejdelse af indsats teori, hvor de udførende terapeuterne inddrages. Evalueringen fandt et øget behov for løbende og konsekvent registrering.

Der kan med fordel laves patientinddragende undersøgelser. PRO skal benyttes i evaluerings- og kvalitets udviklingsarbejdet.

Evalueringen var udbytterig, da denne dannede grundlag for et nyt læringsmiljø i udviklingsarbejdet. Projektet anbefaler andre kommuner at indgå i et tværsektorielt projektarbejde med fokus på kvalitetsudvikling.

**Postergruppe F, torsdag 13.35-14.05, lokale 7-8**

## Udviklingsprojekt om fysioterapi som en del af en kommunal beskæftigelsesrettet indsats

*M Dyrberg (1), Tina Kaae Holm (2), TJ Kofoed (1), LK Mikkelsen (1), NO Müller (1)*

1) Træningsafsnittet, Træning og Sundhed, Social, Job og Sundhed Roskilde Kommune, Roskilde, Danmark

2) Social, Job og Sundhed, Roskilde, Danmark

**Baggrund:** Træning og Sundhed i Roskilde Kommune har i en 4-årig periode samarbejdet med Sygedagpenge afsnittet om sygemeldte borgere, som forventes at blive raskmeldt indenfor en kortere periode.

Fysioterapeuterne udfører en indledende afklarende samtale og tilrettelægger herefter et individuelt 8 ugers tilbud om fysisk aktivitet. Borgeren træner på hold 1-3 gange om ugen med mulighed for at skabe socialt netværk. Efter 6 ugers forløb udarbejdes statusnotat til sagsbehandler. Borgeren tilbydes evt. supplerende tilbud som fx vægtstophold og stress håndteringskursus.

**Formål:** At afklare om fysioterapi til sygemeldte borgere har indflydelse på borgerens tilbagevenden til arbejde.

---

## FREDAG 13. APRIL

**Metodebeskrivelse:** Borgere, som er sygemeldte med muskelskelettsygdomme, stress, depression og psykiske problemstillinger, kan henvises til fysisk aktivitet med fysioterapeuter. Alle borgere gennemgår en systematisk afklarende samtale med fokus på borgerens mål. Borgernes funktionsevne evalueres ved baseline og ved afslutning af forløbet med en række fysiske effektmål, som udvælges med udgangspunkt i borgerens problemstilling. Herunder Patient Specifik Funktionel Scala (PSFS), Roland Morris Questionnaire (RMQ), et-punktstest (Åstrand), 6-minutters gang test (6 MWT) og 1 repetition maximum test (RM). Sygedagpengeafsnittet registrer bl.a. længde på sygdomsperiode. Der er således fokus på økonomi og funktionsevne.

**Resultater:** 400 borgere har deltaget i forløb med fysisk aktivitet. Resultaterne viser, at borgere bliver raskmeldte 20 % hurtigere end før indsatsen blev iværksat. Der arbejdes fortsat systematisk på at opnå flere slutmålinger for at forbedre grundlaget for at evaluere indsatsen med de fysiske effektmål.

**Konklusion:** De foreløbige resultater viser en tendens til, at fysioterapi givet som del af en beskæftigelsesrettet kommunal indsats, kan bidrage til, at sygemeldte borgere kommer tidligere tilbage til arbejdsmarkedet.

**Keywords:** Fysisk aktivitet, sygemeldte borgere, sygedagpenge, beskæftigelse

**Postergruppe F, torsdag 13.35-14.05, lokale 7-8**

### How to move? Quadriceps muscle activity, weight-loading and patient experiences during two different pivot transfers in subacute stroke patients

*Sigrid Lo-Fangel, S Tibaek*

*Department of Occupational Therapy and Physiotherapy,  
Rigshospitalet – Glostrup, University of Copenhagen,  
Glostrup, Denmark*

**Background:** Early and frequent out-of-bed mobilization is an important part of the recovery of poststroke patients, but evidence-based data for the optimal pivot transfer technique is missing.

**Objective:** To investigate whether there are differences in quadriceps muscle activity, weight-loading and patient experiences during two different pivot transfers in subacute stroke patients.

**Design:** A randomised comparative laboratory study.

**Setting:** Inpatients, two university hospitals.

**Participants:** Six stroke patients with median age 56 (54-62) years, one female and five male and within two week poststroke.

**Interventions:** Each participant performed a total of six consecutive pivot transfers (three each over the paretic and the non-paretic lower-extremity).

Main outcomes measures: Surface Electromyography, Pedar-X System and Patient Experience Evaluation Form.

**Results:** The surface electromyographic measurement of quadriceps (rectus femoris) muscle activity (peak) indicate mean of 165.39 (55.64) mV vs. mean 99.38 (55.64) mV,  $p = 0.35$  comparing the paretic with the non-paretic lower-extremity. The Pedar-X System measurement of weight-loading indicate mean of 242.25 (89.08) Newton vs. mean 500.23 (71.05) Newton,  $p = 0.63$  comparing the paretic with the non-paretic lower-extremity. The participants felt significantly safer ( $p < 0.01$ ) and preferred ( $p < 0.01$ ) pivot transfers over the non-paretic lower-extremity to those over the paretic lower-extremity.

**Conclusions:** The results of quadriceps muscle activity and weight-loading indicate no statistically significant differences, while the participants 'experienced feeling significantly safer and preferred transfers over the non-paretic lower-extremity.

---



**Key words:** Paretic lower-extremity, Pedar-X System, pivot transfer, surface electromyography, stroke.

**Postergruppe G, fredag 14.00-14.30, Jylland**

## Implementering af Graded Repetitive Arm Supplementary Program (GRASP) på Center for Hjerneskade – et case-studie

*Christian Dahl-Blumenberg, AKN Larsen  
Center for Hjerneskade, København, Danmark*

**Baggrund:** Efter apopleksi oplever mange, at parese af overekstremiteten (OE) reducerer evnen til at udføre dagligdags-aktiviteter, hvilket har betydning for "life engagement", og at træning af OE negligeres af sundhedspersonalet (Barker & Brauer 2009). Årsagen til sundhedspersonalets prioritering kan være, at potentialet for OE's funktionsforbedring er mindre end for underekstremiteten, og den allokerede træningstid prioriterer man derfor, hvor effekt forventes.

Med hjemmetræningsprogrammet GRASP kan OE trænes intensivt med få therapeuttimer, og ønsket om armtræning kan imødekommes. GRASP har forbedret OE-funktionen hos personer med apopleksi, og udøverne rapporterede høj grad af tilfredshed med interventionen (Harris, Eng, Miller & Dawson, 2009). Udførelsen af GRASP stiller dog fysiske og kognitive krav til patienten, og det kræver ressourcer at implementere GRASP i klinisk praksis.

### Formål:

- At undersøge om det er muligt at implementere GRASP i klinisk praksis på Center for Hjerneskade (CfH).
- At undersøge deltagerens tilfredshed efter syv ugers GRASP-træning.
- At undersøge OE-funktionen efter syv ugers GRASP-træning.

**Deltagerbeskrivelse:** To personer med apopleksi (A og B) og én person med cerebral parese (C).

**Metode:** GRASP trænes en time dagligt i syv uger, justeres ugentligt, og træningsbarrierer, motivation og negative følger noteres. Implementeringsbarrierer for klinisk praksis belyses ved fysioterapeutisk logbogsføring.

Deltagerens tilfredshed og forventninger klarlægges ved interventionsstart- og slut gennem semistrukturerede interviews.

OE-funktion måles før, under og efter intervention med Fugl-Meyers undersøgelse af armmotorik (FMA).

Deltagermanualen er oversat fra engelsk til dansk af en CfH-medarbejder.

**Resultater efter 3 uger:** Instruktion i og justering af GRASP-protokol tog længere tid end forventet. Alle deltagere formåede at træne en time dagligt, med ganske få dages undtagelser. Selvom den daglige træningstid opnåedes, kunne deltagerne ikke nå at udføre alle GRASP-øvelserne på en time.

FMA-score indledende og efter 3 uger: A 61/62, B 60/62 og C 29/32.

Selvom deltagerne beskriver, at det er en krævende intervention, er de tilfredse med selvtræningen og muligheden for at genvinde tabt funktion. Alle udøvere forventer at gennemføre resten af interventionen.

**Konklusion:** De første 3 ugers intervention har vist, at GRASP er implementerbart på CfH. Deltagerne har god compliance og har haft diskret fremgang målt med FMA. GRASP kan være et relevant supplement til fysioterapeutisk træning.

**Postergruppe G, fredag 14.00-14.30, Jylland**

## Move it to improve it (Mitii) – betydning af virtual reality træning for patienter med apopleksi. En eksplorativ interviewundersøgelse

*Katrine Lyders Johansen (1), K Lund (1), KS Rasmussen (1), CR Folman (1), A Vinther (1,2), AK Danielsen (2,3), JB Nielsen (5,6), C Kruuse 4*

1) Afdeling for Ergoterapi og Fysioterapi, Herlev og Gentofte Hospital, Herlev, Danmark

2) Patientforløb og Organisation, Herlev og Gentofte Hospital, Herlev og Gentofte, Danmark

3) Gastroenheden, Herlev og Gentofte Hospital, Herlev, Danmark

4) Neurovaskulær Forskningsenhed, Neurologisk afdeling, Herlev og Gentofte Hospital, Herlev, Danmark

5) Institut for Neurovidenskab, Københavns Universitet, København, Danmark

6) Helene Elsass Center, Charlottenlund, Danmark

**Baggrund:** Patienter med apopleksi har behov for intensiv og længerevarende genoptræning. Virtual reality (VR) pro-

grammer giver nye selvtræningsmuligheder og anbefales i den Nationale kliniske retningslinje for fysioterapi og ergoterapi til voksne med erhvervet hjerneskade, herunder apopleksi.

Move it to improve it (Mitii) er et webbaseret-program, som giver mulighed for individuel selvtræning og hvor patienterne kan superviseres telefonisk.

Mitii er afprøvet i et forskningsprojekt til voksne patienter med apopleksi på bl.a. Neurologisk afdeling, Herlev og Gentofte Hospital.

**Formål:** At belyse, hvordan patienter med apopleksi og deres pårørende oplevede at træne med Mitii efter en apopleksi

**Design:** Eksplorativ interviewundersøgelse med patienter tilknyttet Herlev og Gentofte hospital

**Materiale og Metode:** Semistrukturerede individuelle interviews med patienterne og semistrukturerede fokusgruppeinterviews med deres pårørende.

Patienterne og deres pårørende er rekrutteret fra forskningsprojektet "Effekt af web-baseret individuel træning efter apopleksi, et randomiseret single cross-over studie" blandt de patienter, der har gennemført 16 ugers superviseret selvtræning med Mitii.

**Resultater:** Tre af de 18 patienter som gennemførte 16 ugers træning blev ekskluderet, da de ikke ville kunne gennemføre et interview grundet kognitive og sproglig deficits. Én af de inviterede patienter mødte ikke op til interviewet og datamætning blev opnået efter tolv interviews. Ti ud af 12 pårørende, alle ægtefæller, blev inviteret til deltagelse i fokusgruppeinterview. To pårørende faldt fra til fokusgruppeinterviewet, som blev udført med deltagelse af fire pårørende i hvert interview.

Patienterne oplevede ejerskab til deres eget genoptræningsforløb samt handlekraft til selv at kunne gøre en ekstra indsats.

Den daglige træning blev en naturlig del af deres hverdag og gav dem frihed til selv at planlægge, hvornår træningen skulle udføres.

Hos flere af patienterne har de pårørende haft en afgørende rolle for gennemførelsen af træningsforløbet. Tekniske udfordringer med udstyret og Mitii-programmet har fyldt meget. Patienter og pårørende oplevede et stort behov for en tættere kontakt til de fagprofessionelle.

**Konklusion:** Superviseret selvtræning giver patienter og pårørende handlemuligheder til at kunne påvirke og støtte op omkring genoptræningsforløbet efter en apopleksi.

**Postergruppe G, fredag 14.00-14.30, Jylland**

## Prædiktionsevne af Motor Assessment Scale (MAS) på udskrivelsesdestination efter indlæggelse med apopleksi

*Irene Conradsen, M Henriksen*

*Bispebjerg-Frederiksberg Hospital, København, Danmark*

**Baggrund:** Siden kommunalreformen i 2007 er indlæggelsesforløbene for patienter med apopleksi accelereret, og der er behov for at kunne prædiktere udskrivelsesdestination initialt i indlæggelsesforløbet med henblik på at optimere udskrivelsesprocessen.

**Formål:** Formålet med studiet var at undersøge, hvorvidt MAS score ved indlæggelse kunne prædiktere udskrivelsesdestination efter apopleksi, primært item 1-5 (transfermobilitets item) og sekundært item 6-8 (OE items) samt den totale score.

**Studiedesign:** Prospektivt kohortestudie.

**Materiale og Metode:** 56 fortløbende patienter med apopleksi blev inkluderet, hvoraf 37 havde fået foretaget MAS test. Sammenhængen mellem MAS score og udskrivelsesdestination blev analyseret med logistisk regression. Sensitivitet og specificitet blev estimeret ud fra en ROC kurve. Det optimale skæringspunkt for hvilken score, der bedst prædikterede udskrivelse til eget hjem, blev anvendt i Cox Regressionsanalyse.

**Resultater:** Én enheds stigning i MAS item 1-5 resulterede i højere odds for at blive udskrevet til eget hjem efter hospitalsindlæggelse (OR 1,17, 95% CI 1,04 til 1,32). Samme mønster var kendetegnende for item 6-8 og den totale score. Sensitiviteten for item 1-5 var 91,70% og specificiteten 68,00%. Sandsynligheden for at blive udskrevet til eget hjem var 17 gange højere for patienter med en score >15 point på item 1-5 sammenlignet med patienter med en score ≤15 point (HR 17,02, 95% CI 2,15 til 135,01).

**Konklusion:** MAS test ved indlæggelse kan anvendes som en prædiktor for udskrivelsesdestination efter indlæggelse med apopleksi i en dansk kontekst. Fremtidige studier bør fokusere på at identificere de stærkeste prædiktive faktorer og inkludere disse i en prædiktiv model med hensyntagen til kollinearitet.

**Nøgleord:** MAS, prædiktion, apopleksi, udskrivelsesdestination.

**Postergruppe G, fredag 14.00-14.30, Jylland**

## Neuromuskulær Elektrisk Stimulation af underekstremitet i den Akutte fase efter blodprop i hjernen (NESA) – et kvalitativt og kvantitativt pilotprojekt

Henriette Busk (1), L Lykke (2)

1) Afdeling for Fysioterapi og Ergoterapi, Næstved-Slagelse-Ringsted Sygehuse, Region Sjælland, Næstved, Danmark

2) Afdeling for Kvalitet og Målstyring, Sjællands Universitets-hospital, Roskilde, Danmark

**Baggrund:** Apopleksi forårsager på verdensplan 3.-flest funktionsnedsatte voksne over 65 år. I Danmark er der hvert år ca. 12.000 tilfælde af iskæmisk apopleksi; tallet forventes at være steget med 40% i 2035 pga. flere ældre danskere. Apopleksipatienter har stor sandsynlighed for svære handicap og funktionsnedsættelse. NeuroMuskulær Elektrisk Stimulering (NMES) af det perifere sensormotoriske system faciliterer voluntær bevægelse samt øger muskelstyrke og kan øge funktionsniveauet. Effekten af NMES kombineret med fysisk aktivitet under tidlig rehabilitering er stort set ukendt. Pilotprojektets formål var derfor at undersøge, hvordan patienterne oplevede interventionen, samt hvorvidt kombinationen af de to faktorer forbedrer funktionel bevægelse og Activities of Daily Living (ADL); herunder hvorvidt ekstern, elektrisk stimulering af benet kombineret med fysisk aktivitet forbedrer funktionsniveau og ganghastighed.

**Metode:** Et prospektivt interventionspilotstudie, hvor akutte apopleksipatienter modtog konventionel træning kombineret med NMES. Effekten blev målt kvantitativt med diverse tests samt kvalitativt ved hjælp af semi-strukturerede forskningsinterviews hos akutte patienter, der dagen efter apopleksien blev inkluderet, testet og trænet. Træningen gennemførtes på alle hverdage over 2 uger. Effektparametre blev evalueret ved baseline samt ved henholdsvis dag 7, 14 og 90 for at se ændringer over tid

**Resultater:** 5 deltagere med iskæmisk apopleksi og paresegrad 2-4 i U.E. blev inkluderet og gennemførte intervention, interviews og tests (MAS, TUG, STS og 6MWT). Alle 5 deltagere oplevede tilfredshed med rehabiliteringsforløbet, og at NMES var en mild men effektiv interventionsform, der samtidig virkede symptomnedsættende. Gangfunktionen blev oplevet forbedret, hvilket for patienterne tillægges som en effekt af NMES. Samtlige patienter forbedrede sig i alle testene over tid.

**Diskussion:** Pilotprojektet kunne praktisk gennemføres med inklusion, test, træning og interviews i den akutte periode efter iskæmisk apopleksi. Gennemførligheden af interventionen i det akutte forløb blev støttet op af patienternes

tilfredshedssuccesoplevelser i forbindelse med deltagelse i pilotprojektet. Uden en kontrolgruppe er det ikke muligt at sige, om forbedringen i gangdistance og funktionsniveau skyldes interventionen eller spontan remission. Dermed lægges op til fremtidigt RCT-studie for at finde mereeffekten af NMES-interventionen.

**Nøgleord:** Stroke, electrical stimulation, feasibility, ADL, rehabilitation

**Postergruppe G, fredag 14.00-14.30, Jylland**

## Udvikling og evaluering af et rehabiliteringsprogram til kvinder med oplevede symptomer efter HPV-vaccination

Anne-Mette Juul, DØ Jensen, H Nørgaard, N Rolving  
Regionshospitalet Silkeborg, Silkeborg, Danmark

**Baggrund:** Siden 2015 har ca. 2.000 personer indrapporteret bivirkninger som følge af HPV-vaccination. Størstedelen har gennemgået en grundig lægelig udredning på en af de 5 regionale HPV klinikker. Mange af patienterne angiver, at de har svært ved at klare en normal hverdag med skole eller arbejde, fritidsaktiviteter og socialt liv på grund af fysiske begrænsninger som følge af deres symptomer. Ved HPV-klinikken ved Regionshospitalet Silkeborg blev det derfor besluttet at tilbyde et rehabiliteringsforløb for de henviste kvinder der ønskede dette. Nærværende artikel beskriver rehabiliteringstilbuddet, samt evalueringen af forløbet for de patienter der har deltaget.

**Metode og materiale:** Rehabiliteringstilbuddet blev udviklet baseret på eksisterende erfaringer fra Synkopecentret, men med en tværfaglig vinkel og med anvendelse af kognitiv adfærdsterapi. Patienter blev henvist fra HPV-klinikkens læger til individuel konsultation og evt. efterfølgende rehabilitering ved fysio- og ergoterapeut. Rehabiliteringsforløbet blev evalueret systematisk ved brug af validerede redskaber som COPM, Timed Up and Go og Aastrands ét punkts test ved baseline og ved afslutning af forløbet. Yderligere blev der gennemført løbende patienttilfredshedsundersøgelse.

**Resultater:** I alt 103 kvinder blev set til en individuel konsultation hos fysio- og ergoterapeut, hvoraf 59 accepterede deltagelse i rehabiliteringsforløbet. De fleste havde moderate til svære symptomer, og halvdelen havde symptomer fra

>3 forskellige organsystemer. I alt 22 kvinder gennemførte forløbet og gennemførte afsluttende test. Fra baseline til opfølgende test var der ingen ændring i deltagernes fysiske kapacitet målt med TUG test og Aastrands ét punkts test ( $p > 0.05$ ), mens deltagerne opnåede signifikant forbedring på COPM ( $P < 0.05$ ). For de deltagere der gennemførte forløbet blev der rapporteret stor tilfredshed med forløbets indhold og anvendelighed af de tillærte strategier.

**Konklusion:** Trods løbende justering af forløbet og individuel målsætning var det meget svært at fastholde deltagerne i forløbet. For højt sygefravær på uddannelse og job eller manglende udbytte af forløbet blev angivet som primære årsager, men mange udeblev også uden grund. Det var en kompleks målgruppe med mange symptomer og psykisk sårbarhed, hvor selv simple gulvøvelser og almen undervisning var en udfordring, der krævede 2 terapeuter til stede. Ligeledes erfarer terapeuterne, at der grad manglede kommunale tilbud, hvor de afsluttede kvinder kunne henvises efterfølgende.

#### Postergruppe H, fredag 14.00-14.30, Sjælland

### Bækkenbundstræning gavner mand, som har udviklet afføringsinkontinens efter operation for endetarmskræft – et case-studie

Christopher Neale (1), ML Ejlersen (2), CD Nielsen (2), CP Simon (1,3), B Clausen (1)

1) Afdelingen for Ergo- og Fysioterapi, Næstved, Slagelse og Ringsted Sygehuse, Slagelse Sygehus, Region Sjælland, Slagelse, Danmark

2) Professionhøjskolen Absalon, Næstved, Danmark

3) Institut for Regional Sundhedsforskning, Syddansk Universitet, Odense, Danmark

**Baggrund:** Den primære behandlingsform for endetarmskræft, er operation, lav anterior resection (LAR) hvor kræftknuden fjernes og der kan laves midlertidig stomi. Desværre viser det sig at omtrent hver 3. person udvikler svær grad af afføringsinkontinens, efter operation (1). Bækkenbundstræning med fokus på endetarms-lukkemuskulaturen, menes at kunne nedbringe symptomerne for afføringsinkontinens (2).

**Formål:** Studiet afprøver bækkenbundstræning som behandling til én person, med svær grad af afføringsinkontinens, udviklet efter kirurgisk behandlingsforløb for endetarmskræft.

**Materiale og metode:** Dette case-studie inkluderede en 58 årig mand, som havde udviklet svær grad af afføringsinkontinens efter LAR-operation i 2014, med stomi tilbagelagt i januar 2015.

**Effekt mål:** Før, under (4 uger) og efter (9 uger) bækkenbundstræningen skulle deltageren udfylde spørgeskemaer vedr. sværhedsgrad af afføringsinkontinens (LAR Symptom – Score), livskvalitet (Euro-QoL-5D) og oplevet effekt (Global Perceived Effect), samt have foretaget gynækologisk undersøgelse af fysioterapeut. Den gynækologiske undersøgelse inkluderede vurdering af knibefunktion: knibekraft, udholdenhed og reaktions knibetest. Ligeledes blev der indsamlet anamnetisk information fra deltageren.

**Intervention:** 16 måneder efter tilbagelægning af stomi modtog deltageren i løbet 9 uger, 2 superviserede bækkenbundstræningssessioner ved fysioterapeut. Desuden gennemførte han daglige hjemmeøvelser.

**Resultater:** Deltageren rapporterede ingen klinisk relevant ændring af afføringsinkontinens og livskvalitet henover de 9 uger. Deltageren oplevede en lille forbedring i effekt af behandlingen efter 4 uger men dog uændret effekt efter endt forløb.

Knibekraften forblev uændret henover 9 uger. Både dynamisk udholdenhed og reaktions knibetest blev forbedret. Desuden oplevede deltageren at få fastere afføring, færre daglige afføringer og lækager.

**Konklusion:** Efter 9 ugers bækkenbundstræning var der ingen signifikant ændring i sværhedsgrad af afføringsinkontinens og rapporteret livskvalitet.

Den gynækologiske undersøgelse viste forbedring af reaktionshastighed for knib. Yderligere oplevede deltageren at få fastere afføring, færre afføringer og lækager.

**Perspektivering:** Dette case-studie danner grobund for hypoteser, som skal undersøges yderligere, før det kan få implikationer for klinisk praksis.

**Nøgleord:** endetarmskræft, low anterior resection, afføringsinkontinens

#### Referencer:

- Chen TY-T. et.al: What Are the Best Questionnaires To Capture Anorectal Function After Surgery in Rectal Cancer? *Curr Colorectal Cancer Rep.* 2015 Feb;11(1):37-43.
- Laforest a. et.al: Functional Disorders After Rectal Cancer Resection: Does A Rehabilitation Programme Improve Anal Continence And Quality Of Life? *Color Dis.* 2012;14(10):1231-7.

#### Postergruppe H, fredag 14.00-14.30, Sjælland

## Life with and after cancer – an interprofessional development project

Helle Østergaard (1), B Rittig-Rasmussen (2), H Olsson (3), LE Pedersen (1)

1) Fysioterapi- og Ergoterapiafdelingen, Aarhus Universitetshospital, Region Midt, Aarhus, Denmark

2) Neurologisk Afdeling, Aarhus Universitetshospital, Aarhus, Denmark

3) Onkologisk Afdeling, Krop & Kræft, Aarhus Universitetshospital, Aarhus, Denmark

**Background:** Brief patient pathways and contacts at hospitals as well as reduced staff resources create a need for strengthening of specialist knowledge for patients with cancer.

Department of Oncology in collaboration with Centre for E-learning at Aarhus University Hospital (AUH) developed an online portal for patients with cancer. An interprofessional steering group with representatives from AUH, Regional Hospital West Jutland and Aarhus Municipality was established. All representatives have contributed to decisions concerning and development of the online portal.

This initiative focuses on learning and contributes with knowledge and tools to support patients with cancer and their relatives to cope with life with and after cancer.

**Purpose:** The purpose is to support patients with cancer to live an independent and meaningful life with the best possible level of functioning after the cancer diagnosis.

**Method:** Consensus was reached on three main subjects for the portal: Fatigue, Pain and Psychological impact, based on a list of symptoms and two focus group interviews with patients with cancer.

Interprofessional working groups with specialist knowledge completed the content for the main subjects.

Physiotherapists with specialist knowledge completed the content on physical activity with exercise programmes, training videos and patient narratives. Moreover, tools for making a training diary and setting goals were available at the portal. The portal is based on evidence-based knowledge.

Tools were developed e.g. within mindfulness, nutrition, sleep problems and management of new roles in the family.

**Results:** The online portal is now accessible as a supplement to rehabilitation efforts at hospitals and in municipalities. <http://www.livogkraeft.rm.dk/>

User involvement and learning have been emphasized in the development of the portal, which may be transferable to other patient categories.

**Evaluation:** The portal includes a user feedback button. A tracking device shows which pages users have visited. Six months after the launch, statistics will be made as the basis for discussions, adjustments or revision.

A qualitative study is planned to explore if the portal meets patients' demands for new knowledge, skills or attitudes important for daily living.

**Postergruppe H, fredag 14.00-14.30, Sjælland**

## Oplevelser med anvendelse af kompressionsarmstrømpe – interviews med kvinder med brystkræft-relateret lymfødeme af arm

Stina Bie Kjær (1), DG Hansen (2)

1) Odense Universitets Hospital, Odense, Danmark

2) Syddansk Universitet, Forskningsenheden for Almen Praksis, Odense, Danmark

**Baggrund:** Lymfødeme er en frygtet senfølge efter behandling for brystkræft. Lymfødeme giver synlig hævelse af afficeret sides arm og gener som ømhed, tyngde-, trætheds- og spændingsfornemmelse. Mellem 30-40% af overlevende efter brystkræft forventes at udvikle lymfødeme. Det er en kronisk lidelse, og behandlingen indeholder anvendelse af kompressionsarmstrømpe, hvilket 50-60% har lav adherence med. Flere studier har undersøgt patienters oplevelser af at leve med lymfødeme. Oplevelser med anvendelse af kompressionsarmstrømpe, er så vidt vides kun belyst af få studier med lille overførbare til en dansk kontekst.

**Formål:** Formålet med dette studie er, at generere viden omkring kvinder med brystkræft-relateret lymfødeme af arms oplevelser med at anvende kompressionsarmstrømpe.

**Metode:** Undersøgelsen anvendte et kvalitativt forskningsdesign med en fænomenologisk tilgang. Data blev indsamlet ved otte semistrukturerede interviews af kvinder med brystkræft-relateret lymfødeme af arm. Analysen blev foretaget ud fra Giorgis analysemetoder som beskrevet af Kvale.

**Resultater:** Der er identificeret fem temaer der belyser kvindernes oplevelser med kompressionsarmstrømpe: 1) "Armstrømpe er et godt hjælpemiddel", 2) "Overvejelser om brug af armstrømpe", 3) "Armstrømpe og mødet med omverdenen", 4) "Undren over armstrømpens grimme udseende", 5) "Finde vej i sundhedssystemet".

**Konklusion:** I dette studie belyser fem temaer kvindernes oplevelser af at anvende kompressionsarmstrømpe. Ved at inddrage teori om ICF, findes de største udfordringer på deltagelsesniveau og omgivelsernes faktorer. I mødet med andre mennesker er spørgsmål om den synlige armstrømpe, en gene der minder kvinderne om tidligere sygdom og giver en følelse af at skille sig ud. Samtidig er vejen igennem sundhedssystemet ofte lang og kræver samarbejde mellem region og kommune. I hvilken grad det påvirker den enkeltes livsverden afhænger af personlige faktorer som ressourcer, accept af armstrømpen og accept af lymfødern.

**Postergruppe H, fredag 14.00-14.30, Sjælland**

## Det er sgu mit liv! En kritisk psykologisk analyse af hjerterehabilitering og betydningen hjerterehabiliteringens betingelser har for deltagerens daglige livsførelse

Anne Grøndahl Poulsen (1,2)

1) Medicinsk Terapifsnit, Diagnostisk Center, Regionshospitalet Silkeborg, Danmark

2) Forskningsenheden, Center for Planlagt Kirurgi, Regionshospitalet Silkeborg, Danmark

**Forskningen** er udført som speciale på kandidatuddannelsen i pædagogisk psykologi, DPU, Aarhus Universitet og er en kritisk psykologisk analyse af de betingelser hjerterehabiliteringen på et sygehus stiller for deltagerne og den betydning disse betingelser har for deltagerens øvrige daglige livsførelse.

Specialet anlægger patientens perspektiv og undersøger hvordan fase II hjerterehabiliteringen på et sygehus har betydning for patienternes livsførelse udenfor sygehuset. De teoretiske begreber, der danner afsæt for analysen, er hentet fra den kritiske psykologi.

Empirien generes gennem kvalitative forskningsinterview udført i hjemmene hos fire deltagere på hjerterehabiliteringsholdet i sygehusets fysioterapi. Interviewene er forudgået af adskillige deltagerobservationer.

Den danske kritiske psykolog Ole Dreier hævder, at psykologiske interventioner, der, ligesom fysioterapi, hovedsagelig baseres på evidens, virker i kraft af, at klienterne modificerer dem, når interventionerne integreres i den daglige livsførelse. Nærværende forskning viser dog, at dette ikke altid er tilfældet for interventioner udført i forbindelse med hjerterehabilitering.

Undersøgelsens analyse konkluderer, at alle fire patienter følger anbefalingerne fra sygehuset vedrørende medicin uden modificeringer, til trods for gener i livsførelsen, mens anbefalingerne vedrørende kost og motion modificeres. Desuden er der ingen af de fire deltagere, der modificerer forsikringssselskabernes anbefalinger om ikke at rejse udenlands i den aktuelle periode af deres rehabiliteringsforløb.

Analysen peger på, at deltagerne ikke modificerer medicinindtag og udenlandsrejser, da der er for meget at miste, enten livet selv eller familiens økonomi, mens kost og motion er lav-risiko anbefalinger, som modificeres, når de integreres i den kendte daglige livsførelse og subjektive forståelse af livskvalitet.

Ydermere viser forskningen, at deltagerens selvforståelse ændres i forbindelse med rehabiliteringsforløbet. Specielt de to mænd oplever, at de skal komme til en ny forståelse af sig selv, idet de ikke længere kan være familiens stærke mand og dette påvirker ligeledes den daglige livsførelse.

### Reference:

Dreier, O. (2014). Intervention, evidensbaseret forskning og dagligliv. Nordiske Udkast, 1, s. 5-16.

**Postergruppe J, fredag 14.00-14.30, Fyn**

## Akupunktur som smertebehandling til patienter med postoperative smerter efter sternotomi – et prospektivt pilotprojekt

Rikke Gottlieb, C Dall, M Henriksen

Bispebjerg og Frederiksberg Hospital, København, Danmark

**Baggrund:** Akupunktur tilbydes som supplement til medicinsk smertebehandling ved fx migræne, spændingshovedpine og knæartrose. Forskning viser tendenser til smertelindring på postoperative smerter efter total knæalloplastik af akupunkturbehandling, samt mindre behov for smertestillende medicin postoperativt.

Det tyder på at mellem 21% og 28% af sternotomiopererede patienter oplever smerter svarende til cikatricen på thorax seks til 36 måneder postoperativt. Denne patientgruppe tilbydes medicinsk standardbehandling som eneste smertelindringsmulighed.

**Formål:** Dette pilotprojekts formål er at undersøge, om akupunktur kan benyttes som supplerende smertebehandling til hjertepatienter med postoperative smerter efter sternotomi.

**Metode:** Et ikke randomiseret prospektivt kohorteprojekt (n=11) omhandlende patienter fra en hjerterehabilerings-enhed i Region Hovedstaden med postoperative smerter > 3cm på en 0-10cm visuel analog skala (VAS) seks uger efter sternotomi. Deltagerne blev tilbudt akupunkturbehandling to gange ugentligt i fem til seks uger, som supplerende smertebehandling til deres medicinske behandling. Effekten blev målt på aktuelt smerteniveau (VAS) efter tre og seks uger.

**Resultater:** Der registreredes klinisk relevant forskel på VAS-scoring fra baseline til uge 3 (mean-difference 2,96 cm; SD 2,00; 95% CI; 1,62; 4,31 P = 0,0006), fra baseline og til uge 6 (mean-difference 3,67 cm; SD 1,31; 95% CI; 2,79; 4,55 P < 0,0001).

Ingen deltagere rapporterede tiltagende smerter siden opstart af akupunkturbehandling.

**Konklusion:** Det tyder på at akupunktur kan benyttes som supplerende smertebehandling til patienter med postoperative smerter efter sternotomi. Resultaterne bør efterprøves i større og kontrollerede forsøg.

Postergruppe J, fredag 14.00-14.30, Fyn

## Ændringer i lungevolumina og -funktion fra liggende til siddende stilling to til tre dage efter hjerteoperation

Annette Fjerbæk

Ergo- og Fysioterapi, Aalborg Universitetshospital, Aalborg, Danmark

**Baggrund:** Postoperative pulmonære komplikationer (PPC) er en af de hyppigst forekommende komplikationer efter hjertekirurgi og årsag til forlænget indlæggelse og funktionsnedsættelse efter udskrivelse (1,2). Mobilisering og fysisk aktivitet er en primær indsats til forebyggelse og behandling af PPC, men evidensgrundlaget for denne praksis hos nyopererede hjerte-patienter er sparsomt. Formålet med dette studie var at undersøge ændringer i lungevolumina og lungekapacitet fra liggende til siddende stilling hos nyopererede hjertepatienter.

**Metode:** Undersøgelsen blev foretaget på patienter med coronar bypass eller hjerteklap operation fra Hjerter-Lungekirurgisk afdeling, Aalborg Universitetshospital 2-3 dage efter operationen. Måling af tidalvolumen (Vt), inspiratorisk

kapacitet (IC), respirationsfrekvens (RF), hjerterefrekvens (HR) og perifer iltmætning (SpO2) blev foretaget med Spiropalm 6 MWT (Cosmed, Italien), som er et bærbart udstyr til måling af lungefunktion og respirationsmønster. Måling af alveolær ventilation (VA) og deadspace (Vd) blev foretaget med Beacon Caresystem (BEACON 5, Mermaid Care A/S, Danmark). Smerte og dyspnø blev målt på Numerisk Rating Scale 0 - 10. Målinger blev foretaget i 3 minutter i liggende og efterfølgende i 3 minutter i siddende stilling. Resultater angives i absolutte og relative forskelle mellem positionerne.

**Resultater:** Studiet bygger på data fra 15 patienter med relativt ukompliceret forløb. Der blev vist statistisk signifikante stigninger i Vt (25%), IC (21%), VA (20%), Vd (15%) og SpO2 (0,89%) i siddende stilling, sammenlignet med liggende stilling. RF og HR var stort set uændrede.

**Konklusion og perspektivering:** Der var signifikante stigninger i alle primære outcomes samt i Vd. Studiet bidrager til at evidensbasere tidlig mobilisering i forebyggelse og behandling af PPC hos målgruppen. Studier af lungefunktion i forbindelse med fysisk aktivitet som fx gang og inddragelse af patienter med postoperative komplikationer og forlænget ophold på intensivt afsnit vil være relevante at foretage i fremtiden.

### Referencer:

- Jensen L, Yang L. Risk factors for postoperative pulmonary complications in coronary artery bypass graft surgery patients. *Eur J Cardiovasc Nurs.* 2007;6(3):241-6.
- Litwinowicz R, Bartus K, Drwila R, Kapelak B, Konstany-Kalandyk J, Sobczynski R, et al. In-Hospital Mortality in Cardiac Surgery Patients After Readmission to the Intensive Care Unit: A Single-Center Experience with 10,992 Patients. *J Cardiothorac Vasc Anesth.* 2015;29(3):570-5.

Postergruppe J, fredag 14.00-14.30, Fyn

## Learning and coping strategies in cardiac rehabilitation – one-year effect on return to work: a randomised controlled trial

Birgitte Laier Bitsch (1), V Lynggaard (2),  
CM Stapelfeldt (1), CV Nielsen (1)

1) DEFACTUM Region Midtjylland, Aarhus, Danmark

2) Hjerteforskningsklinikken Hospitalsenheden Vest, Herning, Danmark

**Background:** Cardiac rehabilitation (CR) is known to improve clinical outcomes for people living with ischaemic heart disease (IHD) or heart failure (HF). However, evidence is lacking about how to improve level of function in accordance with the framework of International Classification of Functioning, Disability and Health (ICF). Return to work (RTW) is considered an important aspect of improving level of function; however, personal resources seem to affect the ability to RTW. The patient education 'Learning and Coping Strategies' (LC) integrated in CR programmes aims to promote these personal resources through an inductive, pedagogical approach in CR. This study aimed to assess the effect of adding LC strategies in CR compared to standard CR on RTW one year after inclusion.

**Methods:** The study was conducted from the open randomised trial, LC-REHAB. Enrolled participants in the LC-REHAB trial with IHD or HF were randomised to either the LC arm (LC plus CR) or the control arm (CR alone) across three hospital units in Denmark. The population for the present analysis consisted of 244 participants aged 18 to ≤60 who had not permanently left the labour market. The intervention in the LC arm consisted of individual interviews and group-based situational, reflective, and inductive teaching managed by nurses, physical therapists and experienced patients as co-educators. The control arm was standard CR consisting of structured, deductive teaching. RTW was derived from the Danish Register for Evaluation of Marginalisation (DREAM) and was compared between arms using logistic regression analysis adjusting for stratification variables (gender, cardiac diagnose and hospital unit).

**Preliminary Results:** There was no difference in RTW status between arms one year after inclusion (LC arm: 64.7 % versus control arm: 68.8%, adjusted odds ratio OR: 0.78, 95 %, CI: 0.45-1.34, P=0.37).

**Conclusion:** Addition of LC strategies in CR showed no improvement in RTW at one year compared to standard CR. Implications for further development and research on patient education approaches in CR are needed with increased

focus on development, implementation, and evaluation of interventions, all reflecting the underlying theory of patient education approaches.

Postergruppe J, fredag 14.00-14.30, Fyn

## Fysisk bevægelse for alle børn i folkeskolen

Hanne Christensen

Skanderborg Kommune, Børn og Unge,

Skanderborg, Danmark

**Studiet omhandler hvordan** folkeskolereformens krav om 45 minutters daglig bevægelse udøves på en skole, med fokus på de børn, som er motorisk udfordrede.

Målet har været at undersøge hvordan en lærer og en pædagog håndterer og oplever opgaven med kravet om fysisk bevægelse til børn med motoriske udfordringer - og hvilke muligheder og udfordringer de ser i at udvikle området. Dertil har målet været at belyse, hvordan der kan angives mulige veje til udvikling af området.

Den empiriske undersøgelse (dataindsamlingen) bestod af deltagerobservation og semistrukturerede interviews af lærer og pædagog. Undersøgelsen viser, at der gennemføres fysisk bevægelse til børn i folkeskolen, men med begrænset fokus på inkludering af børn med motoriske udfordringer. Lærer og pædagog er sammen om opgaven, men samarbejdet består især af koordinering og planlægning af aktiviteter, hvor organisering er styret ud fra interesse og erfaringer mere end bevidst professionsmæssig organisering.

Overordnet angives positive muligheder for fysisk bevægelse i skolen. Der er dog udfordringer i, at der er stor variation i udførelsen, hvilket tilskrives en kombination af de professionelle kompetencemæssige forudsætninger, engagement og en åben rammesætning. Dertil ses udfordringer i håndteringen af de særligt motorisk udfordrede børn, hvor der efterspørges yderligere kompetencer - både gennem kompetenceudvikling og gennem inddragelse af specialiserede professioner.

Studiet viser, at fysisk bevægelse og de motorisk udfordrede børn kan ses gennem en forståelse af rammer for aktiviteterne, de som udfører opgaven og deres samarbejde. Studiet viser mangel på didaktisk fokus på mål og børnene læringsforudsætninger, hvorfor indhold og læringsproces styres af de professionelle idéer til aktiviteter. Dertil er der manglende kompetencer og utydelig professionsidentitet til fysisk bevægelse. Studiet beskriver tre mulige udviklingsveje: 1) Fokus



på professioner og individer, hvor der gennem kompetenceudvikling og bearbejdning af identitet skabes bedre grundlag for det didaktiske arbejde, 2) Styrket samarbejde med andre professioner, hvor faglighed, fælles mål og opgaveløsningen samskaber ny praksis og udvikling af de professionelle identitet og 3) Bearbejdning af rammerne – særligt de organisatoriske, som en forudsætning for bedre samarbejde.

#### Postergruppe K, fredag 14.00-14.30, lokale 24

### Kvalitetsudvikling af medlemsbladet "Børn i fysioterapi"

Tina Borg Bruun (1), J Falmår (2)

1) Dansk Selskab for Pædiatrisk Fysioterapi, Frederiksberg, Danmark

2) Dansk Selskab for Pædiatrisk Fysioterapi, Odense, Danmark

**Baggrund:** Dannelsen af Fagligt Selskab for Pædiatrisk Fysioterapi i 2013 affødte behov for at forny og forbedre DSPF's medlemsblad, så det kunne understøtte formålene med et fagligt selskab.

**Udviklingsspørgsmål:** Hvordan udvikle et medlemsblad der imødekommer medlemmernes ønsker og behov, og samtidig understøtter fagligt selskabs formål om at fremme formidling og vidensdeling?

**Metode:** Brugerundersøgelse til at indkredse medlemmernes ønsker og behov for et medlemsblad. Undersøgelsen blev foretaget i samarbejde med Danske Fysioterapeuters analyseenhed i form af et elektronisk spørgeskema udsendt til alle DSPF's medlemmer. Efterfølgende blev svarene tolket og fremlagt kvantitativt og kvalitativt af samme analyseenhed.

Samarbejde med grafiker om at udvikle og udgive et elektronisk medlemsblad

Udarbejdelse af retningslinjer og arbejdsprocesser for redaktionsarbejdet

#### Resultater:

Ad 1. Brugerundersøgelsen:

24% af medlemmerne besvarede det elektroniske spørgeskema. Svarene var bl.a.:

- 55% læste over halvdelen af medlemsbladet.
- 72% ønsker at bladet skal formidle dansk og international forskning, samt udviklingsprojekter

Medlemmernes angivelse af medlemsbladets betydning indenfor pædiatrisk Fysioterapi:

- 76% - at bladet skaber sammenhængskraft blandt fysioterapeuter.
- 60% - at bladet medvirker til det enkelte medlems identitet som fysioterapeut der arbejder med børn.
- 59% - at medlemsbladet giver anledning til debat blandt kolleger.
- 59% ønskede at bladet fremover skal udkomme i elektronisk format

Ad 2. Samarbejde med grafiker:

- Udvikling af elektronisk medlemsblad i bladreform med et læsevenligt og "moderne" layout
- Aftale med VisioLink som udbyder for bladet

Ad 3. Redaktionens arbejdsprocesser:

- Samarbejdsforum i dropbox med bred ansvarsfordeling
  - Udarbejdelse af internt aftaleark vedr. arbejdsprocesser, samt relevante fælles retningslinjer
  - Beslutning om at udsende bladet med MailChimp
- DSPF's bestyrelse har løbende været involveret i og godkendt beslutninger

**Konklusion:** "Børn i fysioterapi" er siden efteråret 2014 udkommet elektronisk 2 gange årligt, omfang 30-40 A4-sider.

Bladet fremstår med professionelt og indbydende layout, og indeholder både artikler om forskning og om praksisudvikling. Der tilstræbes min. 2 skribenter med ph.d.-baggrund pr blad. Generelt tilstræbes artikler med referencer.

Hver blad har et "tema" for en del af indholdet. Er også bestyrelsens og DSPF's talerør.

Uformelt evalueres medlemsbladet meget højt af medlemmerne.

Redaktionen oplever, at adspurgte skribenter gerne leverer vidensartikler til bladet.

Høj evaluering hos annoncører.

Link til bladet:

[www.boernefysioterapi.dk/Medlemmer/Born-i-Fokus/](http://www.boernefysioterapi.dk/Medlemmer/Born-i-Fokus/)  
[www.boernefysioterapi.dk/Bestyrelse/adresseliste/Bestyrelsens-arbejde-/Evaluering-af-medlemsbladet-Born-i-Fokus/](http://www.boernefysioterapi.dk/Bestyrelse/adresseliste/Bestyrelsens-arbejde-/Evaluering-af-medlemsbladet-Born-i-Fokus/)

#### Postergruppe K, fredag 14.00-14.30, lokale 24

## Fysioterapeuters erfaringer med standardiserede målemetoder i pædiatrien

*H Christensen (1), S Nygaard (1), M Stahlhut (2), Derek Curtis (1)*

*1) Institute for Physical and Occupational Therapy, The Faculty of Health and Technology, Metropolitan University College, København, Danmark*

*2) BørneUngeKlinikken, Center for Rett syndrom, Kennedy Centret, Rigshospitalet, Glostrup, Danmark*

**Baggrund:** Der har været et stigende fokus på at få fysioterapeuter til at anvende standardiserede kliniske måleredskaber. Formålet med dette studie var at undersøge fysioterapeuters erfaringer med standardiserede målemetoder i pædiatrien i Danmark, med en forventning om at denne viden kan bidrage til en rationel tilrettelæggelse af fremtidige indsatser indenfor målepraksis i børnefysioterapien i Danmark.

**Metode:** Studiet var baseret på en spørgeskemaundersøgelse. Det anvendte spørgeskema tog udgangspunkt i et publiceret skema fra et canadisk studie (Hanna et al., 2007) og var konstrueret til besvarelse af to overordnede spørgsmål:

I hvilket omfang bliver målemetoder brugt?

Hvilke forhindringer er der til anvendelsen af standardiserede målemetoder?

Indbydelsen til at udfylde undersøgelsen og linket til spørgeskemaet var annonceret i Fysioterapeuten, på relevante hjemmesider og sociale medier.

**Resultater:** I alt 108 respondenter besvarede spørgeskemaet. Respondenterne havde arbejdet med børn i mellem 0-9 år. Alle sektorer og regioner var repræsenteret.

Flertallet af børnefysioterapeuterne, som svarede, bruger målemetoder op til flere gange om måneden eller mere, men en fjerdedel anvender ikke standardiserede målemetoder mere end en gang om måneden.

Respondenternes anvendelse af målemetoder var begrænset ved, at de ikke havde adgang til hjælp via en resourceperson, de havde ikke de redskaber og målemetoder til rådighed, som de skal bruge, og de manglede ressourcer og assistance fra kolleger omkring målemetoder. De manglede ligeledes kendskab til relevante tests, oplevede et tidspres og en manglende prioritering på deres arbejdsplads.

**Konklusion:** Dette studie har forsøgt at opgøre og forklare børnefysioterapeuters anvendelse af standardiserede målemetoder i Danmark. Studiet viser en meget varieret anvendelse blandt børnefysioterapeuter. En forandring i situationen vil kræve, ifølge vores studie, et øget fagpolitisk fokus på

området målemetoder, øgede ressourcer til efter- og videreuddannelse indenfor pædiatriske målemetoder, et øget fokus på arbejdspladsen om værdien og prioritering af dokumentation og videreudvikling af standardiserede måleredskaber til børn med svære fysiske, psykiske og kognitive funktionsnedsættelser.

### Reference:

Hanna, S.E., Russell, D.J., Bartlett, D.J., Kertoy, M.L., Rosenbaum, P. L., & Wynn, K. (2007). Measurement Practices in Pediatric Rehabilitation. *Physical & Occupational Therapy In Pediatrics*, 27(2), 25-42.

**Postergruppe K, fredag 14.00-14.30, lokale 24**

## Reliability of the Danish translation of the Trunk Control Measurement Scale (TCMS-DK)

*Cecilie Sonne-Holm (1), KM Vilhelmsen (2), K Nilsson (3), DJ Curtis (3)*

*1) Kirkebækskolen, Vallensbæk, Danmark*

*2) Dronings Ingrid's Hospital, Nuuk, Grønland*

*3) Professionshøjskolen Metropol, København, Danmark*

**Background:** The Trunk Control Measurement Scale (TCMS) has good clinimetric properties and is one of few measurement instruments that are specifically designed to quantify trunk control in children with cerebral palsy (CP).

**Aims:** The aim of this study was to translate the TCMS to Danish and examine the reliability in children with spastic CP aged 6-15.

**Methods and Procedures:** The TCMS was translated into Danish using a published standard method. Twenty-five children with spastic CP aged 6-15 (mean age 11y 3mo, 9 females, 16 males) in GMFCS levels I-IV were then included in the study. These children were tested twice within 3-10 days.

**Outcomes and Results:** Wilcoxon tests showed a bias in measurements for inter-rater intra-day reliability. Relative reliability (ICC<sub>2,1</sub>) for inter-rater intra-day was 0.986, intra-rater inter-day was 0.941, and inter-rater inter-day was 0.936.

**Conclusions and Implications:** TCMS-DK appears to be a highly reliable method to assess trunk control in children

with CP aged 6-15. This study provides Danish pediatric physiotherapists with a simple and reliable clinical measure to evaluate trunk control in children with independent sitting ability. Future studies are required to establish the validity and responsive to change of the TCMS-DK.

**Postergruppe K, fredag 14.00-14.30, lokale 24**

## Are obese children able to exercise with high training intensity?

Lars Henrik Larsen (1), TC Warner (2), R Jacobsen (3), S Hagstrøm (2,3), U Baandrup (2), S Boudreau (4)  
 1) University College Northern Denmark, Department of Physiotherapy, Aalborg, Denmark  
 2) Center for Clinical Research, North Denmark Regional Hospital, Department of Clinical Medicine, Aalborg University, Aalborg, Denmark  
 3) Department of Pediatrics, Aalborg University Hospital, Aalborg, Denmark  
 4) Center for Neuroplasticity and Pain, SMI, HST, The Faculty of Medicine, Aalborg University, Aalborg, Denmark

**Background:** Obesity in children is an increasing problem with ensuing risk of adulthood obesity and cardiovascular disease. Although physical activity is a highly regarded treatment strategy, many obese children do not participate in high-intensity activities. High-intensity training can increase the desired weight-loss effects of physical training. However, it is unknown whether high-intensity protocols actually results in high cardiovascular load in obese children.

**Objective:** comparison of 12-week high-intensity versus moderate-intensity training protocols on training activity level and heart rate in obese children

**Methods:** 27 children (8-18 years, IsoBMI>30) were randomly allocated to high- or moderate intensity training sessions, as provided in the vicinity of their residence. Trained physiotherapy students conducted one hour sessions, twice a week for 12 weeks. Heart rate and physical activity during training was measured by a Polar team-system. Activity scores for each child was calculated from time spent in 5 heart rate zones (below 60 and above 60, 70, 80 and 90 % of maximal heart rate) and mean and peak heart rate across training sessions for each group were assessed using unpaired t-tests.

**Results:** The high-intensity compared with the moderate-intensity training group showed higher mean activity score ( $P<0.001$ ) and mean ( $P<0.001$ ) and peak ( $P<0.01$ ) heart rate. Although the high-intensity group in average spent 11.2% of the training time in the highest heart rate zone against 1.5% in the moderate group, 6 of 14 high-intensity participants spent less than 5% of the time during the training sessions in this zone.

**Conclusion:** Physical activity targeting high cardiovascular training intensity in obese children effectively resulted in high-intensity training. The long-term effect on obesity and activity level remains unknown and prospective studies should explore these factors and the role of the instructors on the individual children's activity level.

**Implications:** High-intensity training in obese children increases the cardiovascular load and may be a more effective intervention strategy in comparison to moderate-intensity training. Future studies should assess the impact on long-term weight-loss and explore the role of time spent in different heart rate zones.

**Acknowledgement:** The study was supported by UCN Department of Physiotherapy and Region hospital North, Center of clinical research.

**Postergruppe K, fredag 14.00-14.30, lokale 24**

## Kropsbevidsthed – ensidig sensorisk stimulation påvirker midtlinjefornemmelsen

Uffe Læssøe (1,2), L Barth (1), S Skeie (1), K McGirr (3)  
 1) Fysioterapeutuddannelsen, University College Nordjylland, UCN, Aalborg, Danmark  
 2) Forsknings- og udviklingsafdelingen, University College Nordjylland, UCN, Aalborg, Danmark  
 3) Quintiles IMS, København, Danmark

**Baggrund:** Ordet "kropsbevidsthed" er alment kendt og anvendt, men begrebet er ikke præcist defineret. Man kan foreslå en teoretisk opdeling af begrebet kropsbevidsthed i henholdsvis "kropsbillede" og "kropsskema" [1]. Klinisk erfaring tyder på, at man ved hjælp af massage og sensorisk stimulation kan øge en patients fornemmelse for sin krop og påvirke kropsskemaet [2]. Man kan eksempelvis forsøge at stimulere en patient til tage mere vægt på et ben som

ubegrundet aflastes efter immobilisering. Unilateral sensorisk stimulation forventes således at påvirke midtlinjefornemmelsen. Der er dog kun sparsom dokumentation for effekten af denne praksis, hvorfor formålet med dette studie var at undersøge en mulig effekt af unilateral stimulation på den spontane vægtfordeling i stående stilling.

**Metode:** Enogtyve raske unge mennesker deltog i en eksperimentel undersøgelse, hvor to kraftplatforme målte vægtfordeling mellem benene i stående stilling. Vægtfordelingen blev målt før og efter unilateral manuel sensorisk stimulation af et ben. Stimulationen blev udført som fem minutters faciliterende massage og led-kompression, mens deltageren lå på ryggen.

**Resultater:** Ved stimulation af benet med mindst vægtbæring øgedes den gennemsnitlige vægtfordeling på dette ben signifikant fra 48,2% til 49,0%. En lignende, men omvendt virkning blev set, når det contra-lateral ben blev stimuleret. Ved analyse af data med hensyn til stimulation af det ikke-dominante ben øgedes den relative vægtbæring på ikke-dominante ben fra 49,6% til 51,3%.

**Konklusion:** Resultater viste, at manuel sensorisk stimulation kan øge den relative vægtbæring på det stimulerede ben. Disse fund indikerer, at ekstern afferent stimuli kan påvirke kropsopfattelsen og ændre kropsskema og midtlinjefornemmelsen. Resultaterne bør afprøves i forhold til en relevant patientpopulation.

#### Referencer:

- 1) de Vignemont, F., 2016. Bodily Awareness. Stanford Encycl. Philos. (<https://plato.stanford.edu/entries/bodily-awareness/>).
- 2) Andrade, C.K., Clifford, P., 2008. Outcome-Based massage, from evidence to practice., 2nd ed. Lippincott Williams & Wilkins, Philadelphia.

**Postergruppe L, fredag 14.00-14.30, lokale 26**

## The Six Spot Step Test is a reliable measure of balance during walking in persons with Parkinsons disease

*John Brincks (1,2)*

1) VIA University College, Fysioterapeutuddannelsen i Aarhus, Aarhus, Denmark

2) VIA Sundhedsfremme og Rehabilitering, Center for forskning, Aarhus, Denmark

**Background:** Some of the major motor symptoms associated with Parkinsons disease (PD) are slowness of movement, difficulty in initiating and stopping movements and loss of limb coordination, all of which contribute to an unsafe gait and impaired dynamic balance control. Recently, a systematic review recommended that valid and easily administered clinical measurement instruments for dynamic balance are developed in persons with Parkinsons Disease (PwPD). The Six Spot Step Test reflects a comprehensive test of balance during walking relevant for PwPD, and includes elements of lower limb control, strength of muscle synergies, balance control in one leg standing, initiating and stopping of movements, walking speed and dual motor tasks. This easily administered test is validated to persons with multiple sclerosis, but still, no studies have applied The Six Spot Step Test to a PD population.

**Aims:** This study examined the reliability of the Six Spot Step Test in PwPD.

**Methods:** 28 PwPD with a Hoehn & Yahr score of median 2 (inter quartile range= 1) participated. The participants performed The Six Spot Step Test twice on the same day (within-day reliability) 5 minutes apart and once two days later (between-day reliability). Two trained physiotherapist tested the participants, and the same tester tested the same participant at all three events. The results were analyzed with Bland-Altman plots including Limits of Agreement (LoA) and Intraclass Correlation (ICC).

**Results:** Preliminary data found a mean within-day difference on 2.2 % (LOG of -15.1 % to 23.2 %), and an ICC of 0.85 ( $p < 0.001$ ). The mean between-day difference was 2.4 % (LOG of -21.6 % to 33.7 %) with an ICC of 0.75 ( $p < 0.001$ ).

**Conclusions:** Findings suggest that The Six Spot Step test is fairly stable over time in this PD population (approximately +/- 25 % differences), and a change above 25 % can be regarded as a true change in balance during walking for PwPD.

**Postergruppe L, fredag 14.00-14.30, lokale 26**

## The effects of aerobic exercise for migraine and co-existing tension-type headache and neck pain. A randomized, controlled, clinical trial

Lotte Skytte Krøll (1,2), CS Hammarlund (2), M Linde (3), G Gard (2), RH Jensen (1)

1) Dansk Hovedpinecenter, Rigshospitalet, Glostrup, Danmark  
2) Department of Health Sciences, Lund University, Lund, Sweden  
3) Department of Neuromedicine and Movement Science, Norwegian University of Science and Technology, Norway

**Background:** A large proportion (67%) of persons with migraine suffers from co-existing tension-type headache (TTH) and neck pain (NP). They are highly physically inactive and suffer from a large impact of disease. There is increasing evidence that physical activity reduces migraine frequency, pain intensity and pain duration. However, the effect of aerobic exercise involving cross-training, biking and brisk walking for persons with migraine and co-existing TTH and NP has not yet been studied.

**Aim:** To evaluate the effect of a three-month aerobic exercise program for patients suffering from migraine and co-existing TTH and NP in a randomized, controlled, clinical trial.

**Methods:** Consecutively recruited patients with migraine and co-existing TTH and NP were randomized into exercise group or control group. Aerobic exercise consisted of bike/cross-trainer/brisk walking for 45 minutes, three times/week. Controls continued usual daily activities. Pain frequency, intensity and duration; physical fitness, level of physical activity, well-being and ability to perform daily activities were assessed at baseline, at the end of treatment and at follow-up.

**Results:** Fifty-two patients completed the study. Significant between-group improvements for exercise group were found for physical fitness, level of physical activity, migraine burden and in the ability to engage in physical activity due to reduced impact of TTH and NP. Within the exercise group, significant reduction was found for migraine frequency, pain intensity and duration, NP-intensity, burden of migraine; increase in physical fitness and well-being.

**Conclusions:** Exercise significantly reduced the burden of migraine and the ability to engage in physical activity due to reduced impact of TTH and NP. Exercise also reduced migraine frequency, pain intensity and duration although not significant compared to controls. These results emphasize the importance of regular aerobic exercise for migraine treatment.

Postergruppe L, fredag 14.00-14.30, lokale 26

## Kognitiv adfærdsterapi kombineret med fysisk træningsterapi til borgere med længerevarende generaliserede smerter: En systematisk litteraturregennemgang og metaanalyse

Tobias Kaarsbo (1,2)

1) Sano, Skælskør, Danmark  
2) University College Lillebælt, Odense, Danmark

**Baggrund:** Længerevarende generaliserede smerter (CWP) er en lidelse med ukendt ætiologi og med stor betydning for livskvaliteten. Effekten af kognitiv adfærdsterapi kombineret med fysisk træningsterapi (CBTxFTT) til CWP er ukendt.

**Formål:** At evaluere effekten af CBTxFTT til CWP ved behandlingsafslutning og ved  $\geq 3$  måneder efter behandlingsafslutning.

**Søgemetoder:** Søgning i CENTRAL, MEDLINE, EMBASE, CINAHL, PsycINFO og SCOPUS i februar 2016 samt referencelistescreening.

**Udvælgelseskriterier:** Randomiserede kontrollerede studier (RCT'er) af CBTxFTT til voksne diagnosticeret med CWP eller fibromyalgi syndrom.

Indsamling og analyse af data: RCT-identifikation, dataudtræk og vurdering af risiko for bias blev foretaget af en person. Effekten blev estimeret med Hedges  $g$  og standardiseret mean difference (SMD) ud fra random-effects model.

**Hovedresultater:** Fjorten studier med 744 patienter i CBTxFTT-grupper og 743 patienter i kontrolgrupper inkluderes. Ingen studier er uden risiko for bias. Kvaliteten af evidensen er meget lav til lav. Sammenlignet med kontrolgrupper findes CBTxFTT at reducere smerteintensitet med SMD -0,79 (95 % konfidensinterval (KI) -1,19 til -0,39) ved behandlingsafslutning og med SMD -0,36 (95 % KI -0,61 til -0,11) ved langvarig opfølgning; forbedre funktionssniveau med SMD -0,66 (95 % CI -1,27 til -0,06) ved behandlingsafslutning og med SMD -0,49 (95 % KI -0,76 til -0,23) ved langvarig opfølgning; reducere træthedsniveau med 11,35 point (95 % KI 9,44 til 13,25) på en skala fra 8 til 56 ved behandlingsafslutning og med SMD -0,56 (95 % KI -1,10 til -0,03) ved langsigtet opfølgning; og forbedring af sundhedsrelateret livskvalitet (HRQOL) med 11,78 point (95 % KI 9,82 til 13,73) på en skala fra 0 til 80 ved behandlingsafslutning og med 3,05 point (95 % KI 1,87 til 4,23) ved langsigtet opfølgning. Der er ingen statistisk signifikant forskel i frafald mellem CBTxFTT- og kontrolgruppe (relativ risiko 0,97, 95 % KI 0,932 til 1,004).

**Konklusion:** CBTxFTT er effektfuldt til at reducere vigtige

symptomer og forbedre HRQOL for voksne med CWP i forhold til kontrolgruppe, men kvaliteten af evidensen er meget lav til lav.

#### Postergruppe L, fredag 14.00-14.30, lokale 26

### The influence of Virtual Reality Optic Flow Stimulation on postural control in children

H Enderud (1), Julie Veronika Mader Lade (2), A Mundeling (3), K Hansen (4), D Curtis (4)

1) Ny Ellebjerg Fysioterapi, Valby, Danmark

2) Datalogistuderende, Københavns Universitet, Nørrebro, Danmark

3) Rehabiliteringscenter, Norge

**Background:** This method study examined whether optic flow through immersive virtual reality affects postural control in healthy children. According to a Danish register for childrens development, every third child is affected by insufficient motor control compared to the age group, which has a major effect on the child life. Paired with the newest technology, an assessment for postural control is under development.

**Method:** Ten healthy children between 8-12 years participated in the study recruited through colleges and local sports club, Denmark. Static bipedal standing sway were measured using a force plate. Subjects were visually stimulated using VR headset showing a random sequence of virtual movements lasting 2 seconds and comparing this to 90 seconds standard sway measurement with and without virtual reality.

**Results:** The study showed that optic flow through virtual reality had a significant effect on sway velocity in anterior-posterior direction ( $p=0.02$ ) compared to controls, while anterior-posterior and mediolateral range showed higher outcome in control recordings compared to optic flow stimulations ( $p=0.004$ ;  $p<0.001$ ).

**Conclusion:** The study concluded that virtual reality optic flow stimulation significantly affected sway velocity in anterior-posterior direction. With further refinement, this testing technique might be a useful tool to screen balance pathology in subjects with motor dysfunction.

#### Reference:

1. Godoi D, Barela JA. Optical Flow Structure Effects in Children's Postural Control. PloS One. 2016;11(6):e0158416.

2. Shumway-Cook A, Woollacott MH. Development of Postural Control. In: Motor Control: Translating Research into Clinical Practice. 4th ed. Wolters Kluwer; 2010.

#### Postergruppe L, fredag 14.00-14.30, lokale 26

### Modificeret Shoulder Pain and Disability Index (mSPADI) i kommunal genoptræning af borgere med artroskopisk subakromiel dekompression (ASD) og humerusfraktur (HR)

KS Kastfelt (1), Ann Christine Bodilsen (1), T Holm (1), S Conradsen (1), TB Mortensen (1), CB Juhl (2)

1) Træning og Sundhed, Roskilde Kommune, Roskilde, Danmark

2) Herlev og Gentofte Hospital, Afdelingen for Ergoterapi og Fysioterapi, Hellerup, Danmark

**Baggrund:** SPADI er et validt og reliabelt spørgeskema om selvrapporteret skulderfunktion til patienter med skulder dysfunktioner og subacromielle smerter. Der er fundet høj korrelation ( $r \geq 0,70$ ) mellem SPADI og Disabilities of the Arm, Shoulder and Hand (DASH). SPADI anvendes i Roskilde Kommune i let modificeret form til evaluering af patienter med postoperative restriktioner efter ASD og HF. Den samstemmende validitet for mSPADI og Quick-DASH samt Minimal important change (MIC) for patienter med ASD og HF er ikke kendt.

**Formål:** At beregne MIC og responsiveness af mSPADI, samt vurdere den samstemmende validitet mellem Quick-DASH og mSPADI, blandt ASD og HF patienter henvist til kommunal genoptræning.

**Metodebeskrivelse:** mSPADI, og Q-DASH blev indsamlet ved forundersøgelse og efter seks uger. Deltagerne udfyldte desuden en selvrapporteret syv-punkt skala for ændringen i funktionsevnen med kategorier fra "værre end nogensinde" til "fuldstændig helbredelse". Skalaen blev anvendt som referencestandard og MIC beregnet som det optimale ROC cut-off point, hvor summen af falsk positive og falsk negative var mindst. Responsiveness blev beregnet som ændringen i mSPADI fra baseline til efter 6 uger divideret med standard-deviationen på ændringen af mSPADI. Den samstemmende validitet blev vurderet ved korrelationen mellem mSPADI og Q-DASH.

**Resultater:** 52 deltagere med ASD og 46 deltagere med HF blev inkluderet. Korrelationen mellem ændringen på mSPADI

og reference skalaen var 0,32 for både ASD og HF. Deltagere der scorede "lidt forbedret" havde en gennemsnitlig forbedring på 12,8 point for ASD og 18,4 point for HF. MIC for mSPADI var 12,6 point for deltagere med ASD, med et areal under kurven på 0,72. MIC kunne ikke udregnes for HF, da alle deltagere rapporterede fremgang på mSPADI. Korrelationen mellem ændringen i mSPADI og Q-DASH var på 0,56 for ASD og 0,50 for HF. Responsiveness var 0,95 fra baseline til 6 uger for ASD og 1,57 for HF på mSPADI.

**Konklusion:** Responsiveness på mSPADI var høj for både ASD og HF og der blev fundet en acceptabel samstemmende validitet mellem mSPADI og Q-DASH. mSPADI kan anvendes i den kommunale genoptræning af borgere med ASD men bør undersøges yderligere til borgere med HF.

**Keywords:** SPADI, artroskopisk subacromiel dekompression, humerusfraktur, kommunal genoptræning.

**Postergruppe M, fredag 14.00-14.30, lokale 7-8**

## Association mellem erfaringsgrundlag og patientrapporteret effekt med udgangspunkt i praksis, baseret på retningslinjerne for "Godt Liv med Artrose i Danmark"

Johan Riisgaard Laursen  
Sano, Vejle, Danmark

**Baggrund/formål:** Nationale kliniske retningslinjer udarbejdes for flere patientgrupper med formålet at kvalitetssikre praksis gennem evidensbaseret. Godt Liv med Artrose i Danmark (GLA:D) har effektueret retningslinjerne for knæartrose og registrerer tilmed patienternes data. GLA:D har succes med mange deltagere og kliniske enheder. GLA:D tilbyder patientuddannelse og superviseret træning. På tværs af de kliniske enheder observeres forskelle i patienternes resultater af en ellers standardiseret praksis. I den ortopædkirurgiske sektor, har undersøgelser påvist sammenhæng imellem erfaringsgrundlaget (patient-volumen) og patient resultater. Formålet med dette studie er, at undersøge betydningen af GLA:D-klinikerfaring, GLA:D-terapeuterfaring og antallet af GLA:D-terapeuter i en klinisk enhed, i forhold til smerteændringen.

**Metode:** På baggrund af data undersøges associationen mellem ovenstående prædiktorer og smerteændringen i

praksis for knæpatienter. Dataindsamlingsmetoden er sammenlignelig med et prospektivt kohorte design. Smerteændringen kvantificeres via visuel analog skala. Til analyserne af associationerne anvendes mixed model regression i rå og confounder justerede modeller.

**Resultater:** Analyserne i studiet på 8.712 GLA:D-knæpatienter viser statistiske signifikante associationer til smerteændringen for prædiktorerne, Total GLA:D-klinikerfaring og Individuel GLA:D-terapeuterfaring.

GLA:D-klinikerfaringen er associeret med en smerte-reduktion på 0.014, 95%CI (0.004; 0.023) pr. leveret GLA:D-forløb på klinikbasis. Den individuelle GLA:D-terapeuterfaring kan ikke prædiktore tendensen i smerteændringen, med varierende og non-signifikante effektestimater i prædiktorens sub-grupper. Den justerede model viser variationer i smerteændringen fra -1.60 (-4.27; 1.07) til 1.73 (-1.24; 4.69), for de kategoriske inddelinger af prædiktoren.

Antallet af GLA:D-terapeuter på den kliniske enhed har ingen association til smerteændringen i praksis.

**Konklusion:** Prædiktorerne GLA:D-klinikerfaring, GLA:D-terapeuterfaring og antal GLA:D-terapeuter på den kliniske enhed, har lille eller ingen klinisk relevans ift. smerteændringen som følge af GLA:D-interventionen. Resultaterne indikerer, at GLA:D er et relevant redskab til kvalitetssikring af praksis, uden større påvirkning af effekten fra terapeutens eller klinikkens GLA:D-erfaringsgrundlag (patient-volumen).

**Nøgleord:** Osteoartrose, Patient-volumen, Terapeut-erfaring

**Postergruppe M, fredag 14.00-14.30, lokale 7-8**

## Efficacy of pre-operative progressive resistance training in patients undergoing total knee arthroplasty – 12 month follow-up

Birgit Skoffler (1,2), T Maribo (3,4), I Mechlenburg (5,6), CG Korsgaard (7), K Søballe (5), U Dalgas (7)

1) Department of Physical and Occupational Therapy, Aarhus University Hospital, Aarhus, Denmark

2) Institute of Clinical Medicine, Aarhus University, Aarhus, Denmark

3) Section of Social Medicine and Rehabilitation, Department of Public Health, Aarhus University, Aarhus, Denmark

4) DEFACTUM, Central Denmark Region, Aarhus, Denmark

5) Orthopaedic Research Centre, Aarhus University Hospital/Centre of Research in Rehabilitation (CORIR), Department of Clinical Medicine, Aarhus, Denmark

6) Centre of Research in Rehabilitation (CORIR), Department of Clinical Medicine, Aarhus, Denmark

7) Section of Sport Science, Department of Public Health, Aarhus University, Aarhus, Denmark

**Background:** Efficacy of pre-operative progressive resistance training on functional performance and muscle strength has been demonstrated six and twelve weeks after total knee arthroplasty. However, no study on long term follow-up of preoperative training has been identified by the authors.

**Objective:** To investigate the efficacy of progressive resistance training 12 month post-operatively in patients undergoing total knee arthroplasty.

**Methods:** 59 patients were included in a single-blind, randomized, clinical, controlled trial. Participants were randomized to preoperative progressive resistance training (intervention group) or control group who “lived as usual” the last 4 weeks before total knee arthroplasty. The intervention group completed 4-weeks pre-operative and 4-weeks post-operative progressive resistance training whereas the control group only completed 4-weeks post-operative progressive resistance training. Outcome measures were functional performance, e.g. 30s chair stand test, knee extensor and knee flexor muscle strength and patient-reported outcomes. Intervention group and control group were compared at 12 months with 30s chair stand test as primary outcome. Statistical analyses were performed according to the intention-to-treat principle.

**Results:** 15 patients dropped out before 12 months follow-up. A borderline significant group difference was found in regard to 30s chair stand test (4.0 rep. (2.7; 5.2) vs. 2.3 (0.9; 3.6),

$p=0.067$ ) in favour of the intervention group. The intervention group had significantly higher normalized knee extensor muscle strength (0.5 Nm/kg (0.4;0.6) vs. 0.2 Nm/kg (0.1;0.3),  $p=0.002$ ) and higher normalized knee flexor muscle strength (0.3 Nm/kg (0.2;0.4) vs. 0.2 Nm/kg (0.0;0.3),  $p=0.042$ ) in the operated leg compared to the control group.

**Conclusions:** Supervised pre-operative progressive resistance training had borderline long-time effect on functional performance and statistically significant effect on muscle strength in patients undergoing total knee arthroplasty.

**Postergruppe M, fredag 14.00-14.30, lokale 7-8**

## Knowledge, use, and implementation of National Clinical Guidelines in community-based rehabilitation. A cross-sectional survey

Ditte Hartington, B Nørgaard

Syddansk Universitet, Region Syddanmark, Odense, Danmark

**Background:** Despite an increasing amount of research with-in physiotherapy, consistent implementation of evidenced based guidelines in every day physiotherapy remains a challenge.

**Objective:** To examine knowledge, use, and implementation of National Clinical Guidelines (NCG) for knee arthrosis (2012) and meniscus pathology (2016) among leaders, development employees, and physiotherapists in community based rehabilitation (Region Zealand, Denmark)

**Design:** A cross-sectional survey

**Methods:** A web-based survey was conducted using a questionnaire developed for this specific study. Data was analyzed using STATA (Version 14.1. Copyright 1985-2015 Stata-Corp LP). Results are presented descriptively in tables and figures, and analyzed further by proper statistical tests to examine factors associated with evidenced based practice.

**Results:** The questionnaire was completed by 61 respondents, generating a 75,3% response rate. The respondents demonstrate a significantly better knowledge of NCG for knee arthrosis than NCG for meniscus pathology ( $p=0.017$ ), and they also state that the first have more potential of improving rehabilitation ( $p=.007$ ). Respondents state that



the community based rehabilitation units have developed local guidelines for knee arthrosis (82%, n=50) and meniscus pathology (74%, n=45). Nearly three out of four (72%, n=44) state that relevant parts of NCG for knee arthrosis is integrated in local guidelines, whereas only half (49%, n=30) state that relevant parts of NCG for meniscus pathology is integrated in local guidelines. Physiotherapists tend to use local guidelines more frequently than NCG for knee arthrosis ( $p=0.012$ ) and meniscus pathology ( $p=0.012$ ). Positive correlation between changes in work routines and implementation of NCG for knee arthrosis exists among physiotherapists ( $p=0.013$ (Chi2-test)/ $p=0.027$  (Fishers Exact)). Important factors for implementing NCG in community-based rehabilitation units is sufficient time (46%, n=42), knowledge of NCG (31%, n=19), perceived relevance of NCG (33%, n=20) and support from local leaders (23%, n=14).

**Conclusion:** The results show differences in knowledge, use, and implementation of National Clinical Guidelines among leaders, development employees and physiotherapists in community based rehabilitation. Evidence based guidelines do not necessarily translate directly into local guidelines and evidenced based practice.

**Postergruppe M, fredag 14.00-14.30, lokale 7-8**

## Modifiable predictors for impression of change and acceptable symptom state among musculoskeletal disorders in physical therapy – a prospective cohort study

Lars Pårup (1,2), N-B de Vos Andersen (3),  
DH Christiansen (3,4)

1) Klinik Odder Fitness Center, Danmark

2) Health Group A/S, Hellerup, Danmark

3) Afdeling for Kvalitet og Lægemedler, Region Midtjylland, Viborg, Danmark

4) Arbejdsmedicin, Universitets Klinik, Hospitalsenheden Vest, Herning, Danmark

**Introduction:** Musculoskeletal disorders (MSDs) constitute a significant proportion of the disease burden in Denmark. Of these complaints related to the lower-back, neck and shoulder, are the most common MSDs presentations in primary care physical therapy. Identifying modifiable predictors among these patients that can direct and individualize treatment are considered an important research priority.

The patients' perspective on remission as Patient Reported Outcome Measures is imperative, but perceived remission has many constructs and highlights different perspectives that may lead to discrepancies in predictors. The Patient Global Impression of Change (PGIC) and Patient Acceptable Symptom State (PASS) are commonly used to assess outcomes in MSDs.

**Objective:** To identify and compare modifiable generic predictors for PASS and PGIC among patients with neck, shoulder or low back pain in primary care physical therapy.

**Methods:** The study was a prospective cohort study (n=816) of patients seeking treatment for neck, shoulder or low back pain in 21 physical therapy practices across Denmark in the period from January to June 2016. Predictors were collected prior first consultation and the outcomes of PASS and PGIC at 3 and 6 months'. Potential predictors were analyzed by GEE modeling in the framework of phase 1- and 2 prognostic research studies.

**Results:** Multivariable analyses showed good general- and mental health, self-predicted prognosis, disability and coping were significant predictors for both outcomes, whereas pain scores, related sick leave, use of analgesics and related sleep disturbance were only predictive for PASS.

**Conclusions:** Some consistency in predictors for PASS and PGIC were found in the present study, but also relevant discrepancies as some predictors were exclusively predictive for the attainment of PASS. The operationalization of one specific outcome cannot be highlighted as they may measure different aspects of perceived remission.

Perspectives and implications: To understand the prognosis of MSDs generic predictors such as mental health and self-assessed prognosis seems of importance. Further development of more comprehensive predictive models to interpret these predictors will aid the understanding of the multifactorial and complex pathway.

**Postergruppe M, fredag 14.00-14.30, lokale 7-8**

# FORFATTERINDEKS

---

---

Aggergaard, Jesper .....	51
Alberg, Morten .....	33
Andersen, Christina .....	65
Andreasen, Jane .....	37
Andreasson, Karen Hjerrild .....	116, 117
Arbjerg Højen, Anette .....	41
Areskoung Josefsson, Kristina .....	32, 48, 83
Bandak, Elisabeth .....	91
Bandholm, Thomas .....	29, 57, 77, 78, 82
Bartholdy, Cecilie .....	90, 91
Bek Clausen, Mikkel .....	39, 75
Bendtsen, Magnus .....	31
Bentholm, Anette .....	96
Bernhardt, Julie .....	18, 35
Beyer, Rikke .....	50
Beyer Sørensen, Iben .....	69
Bieler, Theresa .....	89
Birkmose, Dorthe .....	55
Bitsch, Birgitte Laier .....	129
Bjarke Vægter, Henrik .....	33, 72
Bjerre, Eik .....	31
Bloch-Nielsen, Jannie Rhod .....	41, 115
Bloomquist, Kira .....	31
Bodilsen, Ann Christine .....	58, 135
Bogh Juhl, Carsten .....	54
Bonnerup Hesby, Bue .....	49
Borg Bruun, Tina .....	130
Brincks, John .....	133
Brocki, Barbara C. ....	47
Broholm, Daniel .....	46
Brunner, Iris .....	29
Busk, Henriette .....	124

---

Byrgesen, Stephanie Mie .....	88
Bærentzen, Michelle .....	106
Baagøe, Susanne .....	51
Campbell, Anna .....	19
Campbell, Kristin .....	31
Cederholm, Tommy .....	25, 40
Christensen, Hanne .....	129, 131
Christensen, Jette .....	93, 108
Christiansen , David Høyrup .....	73, 74, 138
Clark, Emma .....	24, 31
Conradsen, Irene .....	123
Cools, Ann .....	30
Curtis, Derek .....	37, 53, 131, 135
Dahl-Blumenberg, Christian .....	122
Dalgas, Ulrik .....	38, 59, 60, 86, 92, 137
Damiano, Diane .....	17, 37
Damkjær, Lars .....	48
Danielsbacka, Jenny .....	41
de Liphay Behrend, Patricia .....	94
de Vos Andersen, Nils-Bo .....	73, 74, 138
Diana Nørregaard Rasmussen, Charlotte .....	49
Doherty, Patrick .....	22, 30
Duus, Lene .....	107, 108
Edqvist, Irma .....	47
Eibye Pedersen, Lene .....	98
Ellegaard, Karen .....	36, 63
Errebo-Jensen, Brian .....	53
Eshøj, Henrik .....	30, 75
Estrup, Simon .....	31
Feys, Peter .....	21, 38
Fisker, Jakob .....	46
Fjerbæk, Annette .....	128

---

---

Frank Fenger, Mette .....	54
Gade, Per .....	51
Gerbild, Helle .....	32, 48, 83
Ginn, Karen .....	23, 30
Gormsen Hansen, Rasmus .....	54
Gottlieb, Rikke .....	127
Gravesen, Pi .....	51
Grundt Hansen, Niklas .....	40, 111
Guldhammer Skjerbæk, Anders .....	38, 86
Hansen, Caspar .....	109, 110
Hansen, Henrik .....	30
Hansen, Maria Swennergren .....	63
Hansen, Sebrina .....	61
Hartington, Ditte .....	137
Hautop Lund, Henrik .....	49
Heiberg, Bibi .....	111
Herman, Pernille .....	31
Hermann Tang, Lars .....	30, 99
Holm, Bente .....	93
Holm, Pætur Mikal .....	91
Holm, Tina Kaae .....	121
Holst, Agnes .....	53
Hornshøj, Hanne .....	93
Hovmøller, Elsebeth .....	107
Hulsbæk, Signe .....	86
Ibsen, Charlotte .....	79, 80, 81
Ingwersen, Kim .....	30, 75
Jacobsen, Julie Sandell .....	60
Jacobsen, Kurt .....	13
Jacobsen, Maria .....	120
Johansen, Katrine Lyders .....	84, 122
Juul-Kristensen, Birgit .....	75

---

Juul-Larsen, Helle .....	57
Jørgensen, Jørgen Roed .....	104
Kierkegaard, Signe .....	59, 60
Kjeldgaard Jensen, Esben .....	46
Kjær, Per .....	49, 100, 101, 112
Kjær, Stina Bie .....	126
Knudsen, Trine .....	119
Kolbye, Peter .....	45
Krøll, Lotte .....	134
Kaarsbo, Tobias .....	134
Lade, Julie Veronika Mader .....	135
Lammert, Anne .....	45
Larsen, Camilla Marie .....	75, 83
Larsen, Lars Henrik .....	34, 43, 54, 113, 114, 132
Laursen, Johan Riisgaard .....	136
Lebech, Lene .....	31
Lerkær, Jakob .....	58
Levin, Mindy .....	26, 29
Lindberg, Kajsa .....	65, 66
Linding Jakobsen, Thomas .....	29, 78
Loenneke, Jeremy .....	29, 46
Lo-Fangel, Sigrid .....	121
Læssøe, Uffe .....	132
MacDonald, Chris .....	15
Mann, Stephanie .....	76
Marie Kofod, Linette .....	69, 116
Masci, Lorenzo .....	36, 50
McCracken, Lance .....	20, 33
Mechlenburg, Inger .....	59, 60, 61, 92, 137
Mikkelsen, Lone Ramer .....	61, 62, 89
Mikkelsen, Nicolai .....	99
Morsø, Lars .....	67, 68, 111, 120

---

---

Møller, Merethe	34
Neale, Christopher	125
Nees, Jacob	51
Nielsen, Jacob	49
Nielsen, Josephine	43
Nielsen, Lone	44
Niemeijer, André	44
Nordbye-Nielsen, Kirsten	44, 64, 96
Nyboe, Lene	40
Odderskær, Nikolaj	66
Olandersson, Samuel	40
Olsson, Carsten	45
O'Sullivan, Kieran	27, 34
Overgaard, Jan Arnholtz	62, 87, 88
Pallesen, Hanne	105
Pedersen, Tonny Jæger	67
Peolsson, Anneli	34
Petersen, Charlotte	118
Petersen, Maria Rothgart	97
Piper, Katrine Storm	109
Poulsen, Anne Grøndahl	127
Præstegaard, Jeanette	54
Puggaard, Lis	29
Pårup, Lars	138
Qvortrup Geisling, Peter	14
Ramos Stavngaard, Christina	46
Rams Rathleff, Camilla	37
Rasmussen, Hanne	49
Rasmussen, Helle Mätzke	95
Rathleff, Michael	39
Riberholt, Christian	84, 104
Richter, Christina	86

---

Riel, Henrik	39
Ris, Inge	100
Rokkedal Jønsson, Line	35, 78
Rolving, Nanna	41, 124
Rosenberg, Ditte	72
Rousing Oberländer, Peter	48
Sandal, Loise	49
Schmidt, Anne Mette	79
Schrøder, Lisbeth	45, 53
Scott, Jessica	31
Seneca, Trine	64
Skoffer, Birgit	92, 137
Skov Husted, Rasmus	39, 77
Skuli Palsson, Thorvaldur	34, 79
Stahlhut, Michelle	37, 53, 131
Steengaard Sørensen, Anders	49
Stensgaard, Stine	71
Stenz, Cathrine	32
Storm, Lisbeth	82
Stout, Nicole	19
Svanborg Kjeldsen, Simon	35
Sørensen, Katrine Astrup	70, 71
Sørensen, Line Bjerre	105
Tange Kristensen, Morten	35, 40, 58, 62, 63, 65, 66, 78, 86, 87, 88, 110
Tegner, Heidi	101
Thomsen Rimmen, Lissi	40
Thorborg, Kristian	34, 39, 44, 60, 75, 77
Tikjøb, Hirse	45
Toftdahl, Anne Katrine Skjølstrup	80
Toftegaard Pedersen, Vivi	119
Trøstrup, Jeanette	89
Tygesen Schmidt, Jannie	43

---



Ussing, Anja .....	82
Ussing, Kasper .....	101, 112
Vangsgaard, Birgitte .....	51
Versterre, Signe .....	69, 85
Walther Jørgensen, Lise .....	57
Warming, Susan .....	57, 69, 90
Wassar Kirk, Jeanette .....	37
Wildman, Stuart .....	36, 50
Wittrup Christensen, Steffan .....	34
Ægidius, Kirsten .....	53
Ø. Nielsen, Rasmus .....	34
Østergaard, Elisabeth Bomholt .....	115
Østergaard, Helle .....	69, 126
Aagesen, Maria .....	58

---



## *Vi holder mennesker i bevægelse*

Vi lever og arbejder længere. Vi skal være aktive i flere år end tidligere. Det stiller krav til kroppen. Den skal løfte flere opgaver i længere tid. Den skal kunne holde til mere.

Det gør vi noget ved. Som fysioterapeuter behandler vi børn, unge, voksne og ældre. Vi vejleder og motiverer dem til at tage ansvar for kroppen, så de kan være aktive så længe som muligt.

Sammen gør vi syge mennesker raskere. Svage mennesker stærkere. Sunde mennesker sundere. Vi holder mennesker i bevægelse. Det er godt for den enkelte, for familien, kærligheden, arbejdet og økonomien.

Vores fag er i konstant udvikling, for fysioterapi handler både om samfund og mennesker og om at sikre den bedste kvalitet af det enkelte liv uanset livssituation. Det giver mening. Det får os op på tæerne.

Bevægelse er midlet. Frihed er målet. Frihed til at flytte sig og få et bedre liv.



DANSKE FYSIOTERAPEUTER  
**1918 - 2018**



*Vi holder mennesker i bevægelse*

---

Danske Fysioterapeuter  
April 2018  
[www.fysio.dk](http://www.fysio.dk)

