


Amager og Hvidovre Hospital

Physical Medicine and Rehabilitation Research – Copenhagen (PMR-C),
Departments of Physiotherapy and Orthopaedic Surgery.




REGION


Physical therapy after hip fracture: Why, when and how: overview of the evidence.

Ortogeriatrisk Vårsmøte, Oslo, Plaza 9. mai
Kl. 14.15 – 14.45

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ACADEMY OF
**ORTHOPAEDIC
PHYSICAL THERAPY**
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Part of a group that develop Clinical Practice Guideline for Physical Therapy Management of Older Adults with Hip Fracture


Preliminar results!



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*Interventions***Pre-specified Inclusion and Exclusion Criteria****Patient / Subject Characteristics****Inclusion criteria**

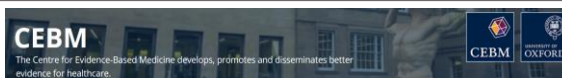
- > 65 years of age
- fragility hip or proximal femur fracture (intra & extracapsular)
- All surgical approaches (hemi – and total arthroplasty, internal fixation – intramedullary nail, compression screws, plate and screws)

Exclusion criteria

- Femur (distal/shaft), acetabular fracture, traumatic fracture

*Interventions***Evidence Levels**

I	Evidence obtained from systematic reviews, high-quality diagnostic studies, prospective studies, or randomized controlled trials
II	Evidence obtained from systematic reviews, lesser-quality diagnostic studies, prospective studies, or randomized controlled trials (eg, weaker diagnostic criteria and reference standards, improper randomization, no blinding, less than 80% follow-up)
III	Case-control studies or retrospective studies
IV	Case series
V	Expert opinion



<https://www.cebm.net/wp-content/uploads/2014/06/CEBM-Levels-of-Evidence-2.1.pdf>



Grades of Recommendation

Interventions

GRADES OF RECOMMENDATION	STRENGTH OF EVIDENCE
A	Strong evidence A preponderance of level I and/or level II studies support the recommendation. This must include at least 1 level I study
B	Moderate evidence A single high-quality randomized controlled trial or a preponderance of level II studies support the recommendation
C	Weak evidence A single level II study or a preponderance of level III and IV studies, including statements of consensus by content experts, support the recommendation
D	Conflicting evidence Higher-quality studies conducted on this topic disagree with respect to their conclusions. The recommendation is based on these conflicting studies
E	Theoretical/foundational evidence A preponderance of evidence from animal or cadaver studies, from conceptual models/principles, or from basic science/bench research support this conclusion
F	Expert opinion Best practice based on the clinical experience of the guidelines development team

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Across the Continuum of Care

- Structured Exercise, including progressive strength training
- Multidisciplinary Management



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Sorry – not allowed to share specific data of the CPG presented at the Oslo meeting – but the entire CPG will be published within the following year!

Preliminary recommendations for physical therapy

Across Continuum of Care


- Interdisciplinary Management
- Structured Exercise, strength training incl.

Early Postoperative/Inpatient Setting

- Multi-disciplinary rehab
- Early assisted ambulation
- Frequency of Physical Therapy
- Structured exercise – also for patients with dementia
- E-stim for pain if needed
- E-stim for quadriceps strengthening

Post-acute Period/Home and Community Setting

- Extended Exercise
- Aerobic/endurance exercise



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**ORTHOPAEDIC
SECTION**





American Physical Therapy Association

Reduced Physical Activity after HF







Article

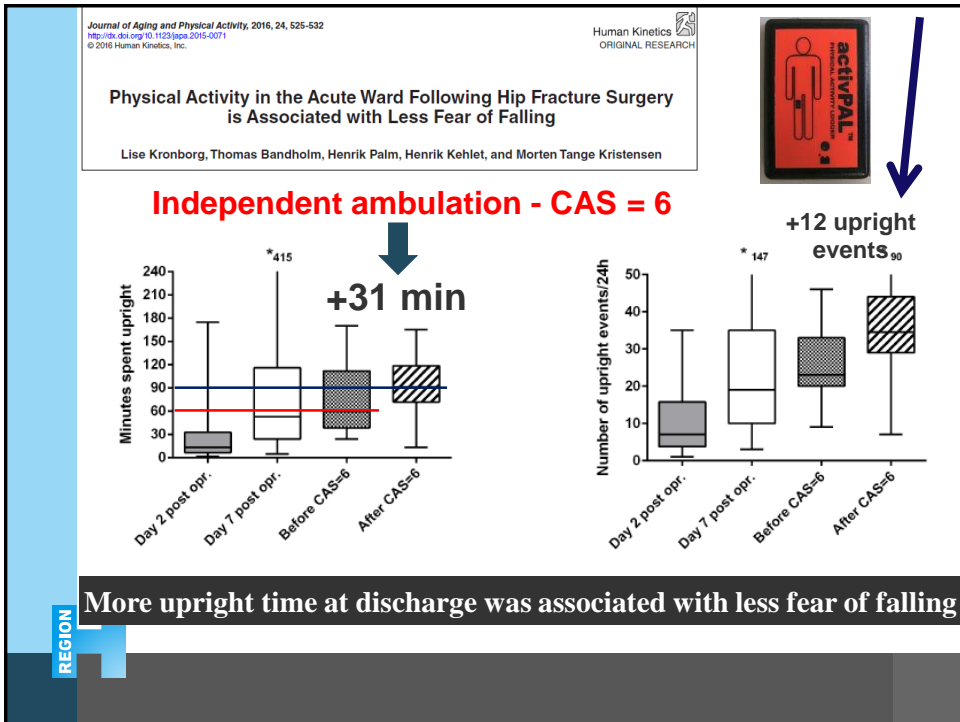
A systematic review of evidence for older adults' sedentary behavior and physical activity after hip fracture

Enav Z Zusman^{1,2}, Martin G Dawes², Nicola Edwards¹ and Maureen C Ashe^{1,2}

CLINICAL REHABILITATION

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 Archives of Physical Medicine and Rehabilitation 2017;98:2533-9

ORIGINAL RESEARCH

Maximum Tolerated Dose of Walking for Community-Dwelling People Recovering From Hip Fracture: A Dose-Response Trial

Casey Peiris, PhD,^{a,b} Nora Shields, PhD,^{a,b} Michael Kingsley, PhD,^a Jack Yeung, BPO,^a Raphael Hau, MBBS,^{b,c} Nicholas Taylor, PhD^{a,d}

Dose	Minutes Per Week	Increment (%)
1	10	
2	20	100
3	35	75
4	55	57
5	75	36
6	100	33
7	125	25
8	150	20

- Supervised 1-week walking
- Walking bouts of ≥ 10 minutes
- Borg CR10 scale ≥ 3 (moderate)

Recruited from community rehab - mean (SD) of 110 (47) days post-fracture. N=21

Almost all had not been for a walk outside their own garden

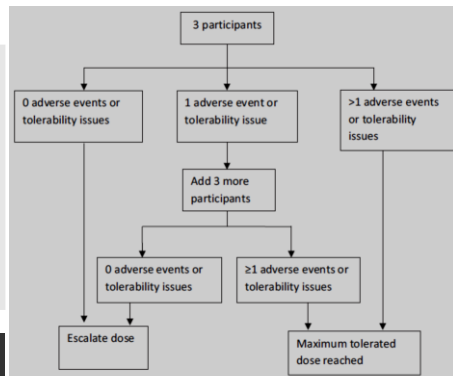


Fig 1 Study design: phase I, 3+3 design.



13 **ACRM** Archives of Physical Medicine and Rehabilitation
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Recruited from community rehab mean of 110 (47) days post-fracture. N=21

Almost all had not been for a walk outside their own garden

Up to 100 min walking per week (dose 6) with moderate intensity was tolerated by all.

No safety issues at any of these doses.

Prescription of supervised outdoor walking seems effective towards increasing Physical Activity after hip fracture



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14 Article

Motivational interviewing increases physical activity and self-efficacy in people living in the community after hip fracture: a randomized controlled trial

Paul D O'Halloran¹, Nora Shields^{1,2}, Felicity Blackstock¹, Elizabeth Wintle³ and Nicholas F Taylor^{1,3}

Recruited 6 months post-fracture

Monitored 1-week before and after an 8-week RCT program, N=30

Intervention group:

Usual care +30 min/weekly motivational interview phone calls by trained physiotherapist

Compared to usual care control group



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Article

Motivational interviewing increases physical activity and self-efficacy in people living in the community after hip fracture: a randomized controlled trial

Paul D O'Halloran¹, Nora Shields^{1,2}, Felicity Blackstock¹, Elizabeth Wintle³ and Nicholas F Taylor^{1,3}

Recruited 6 months post-fracture

monitored 1-week before and after a 8 week RCT program, N=30

Intervention group:

- Took more steps per day (mean = +1237, 95%CI; 12 – 2463)
- Walked more min/day (mean = +14.4, 95%CI; 0.6 – 28.8)
- Were more confident about walking and not falling
- + improved health-related quality of life and mental health

Compared to usual care control group

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Physical Activity Monitor

Fragility Fracture Network

<https://www.fragilityfracturenetwork.org/>

Membership is free of charge!

Fragility Fracture Network Physiotherapy Special Interest Group

<https://www.linkedin.com/groups/8678492/>

https://twitter.com/FFN_PT_SIG

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Many thanks for the invitation and attention!

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