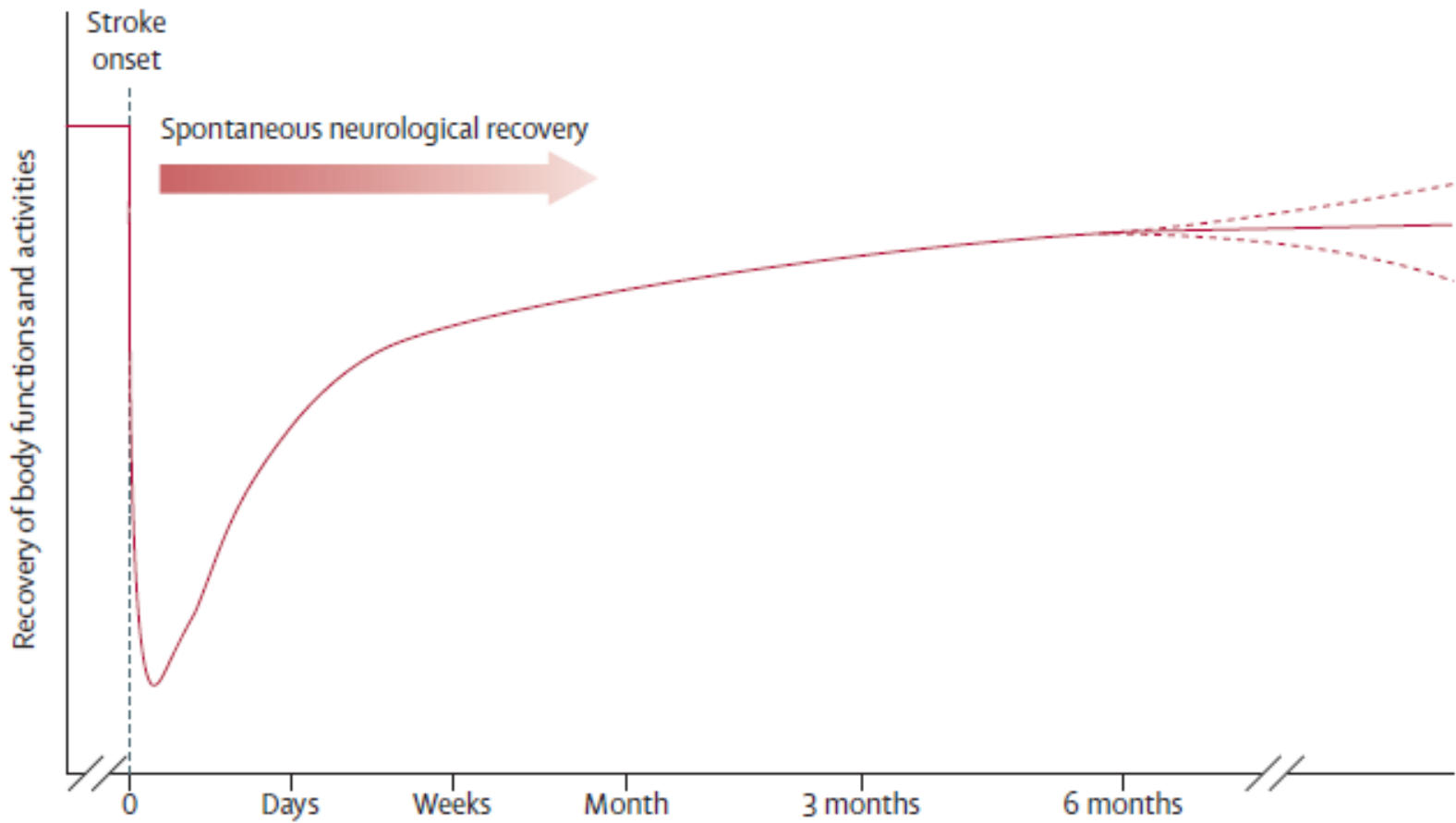Specialiseret stroke service

Hvad er der brug for, og hvordan sikrer vi kvaliteten af
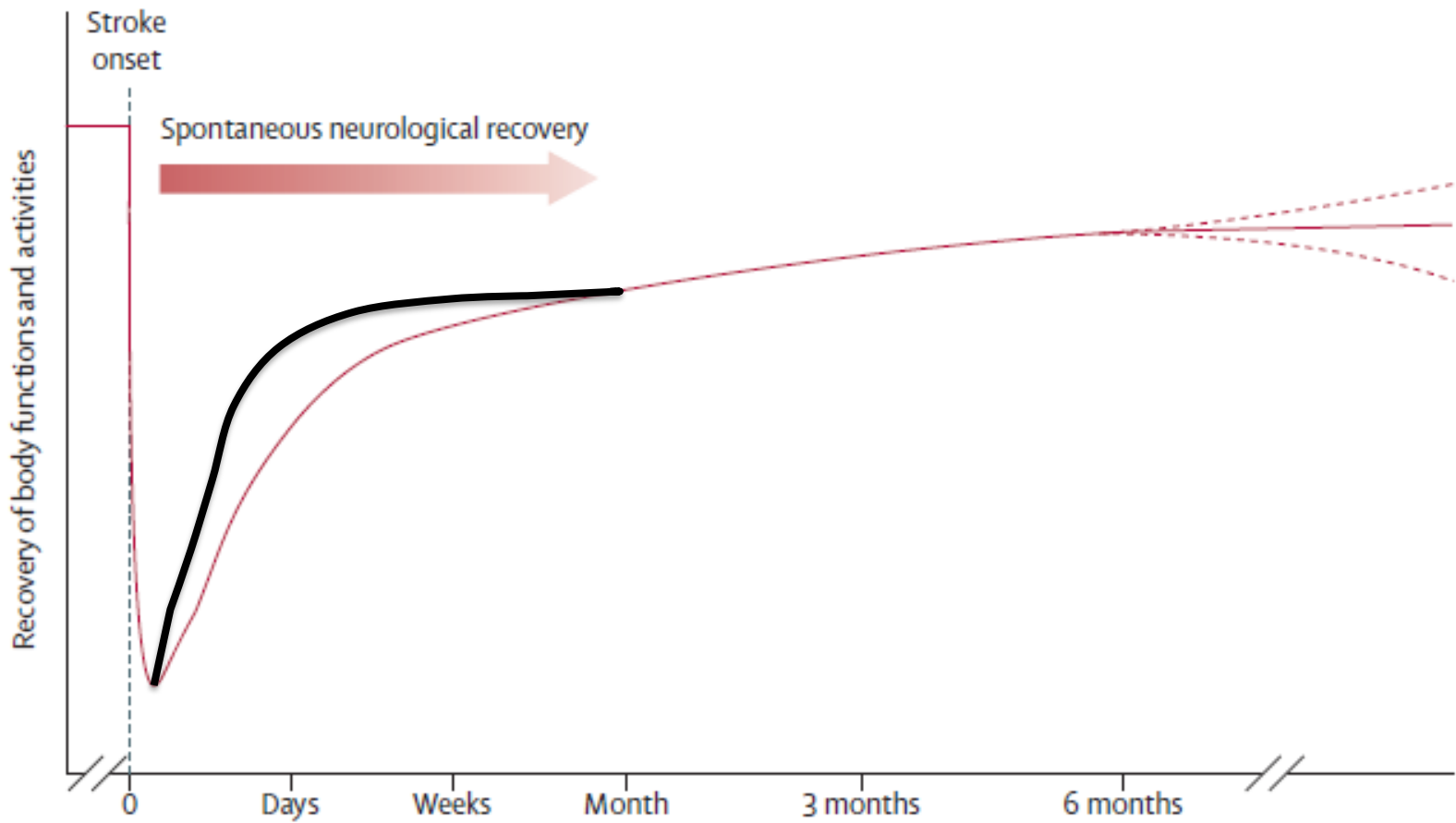
tilbud?

Har tidlig eller mere intensiv rehabilitering effekt og hvor

længe er der brug for rehabilitering.

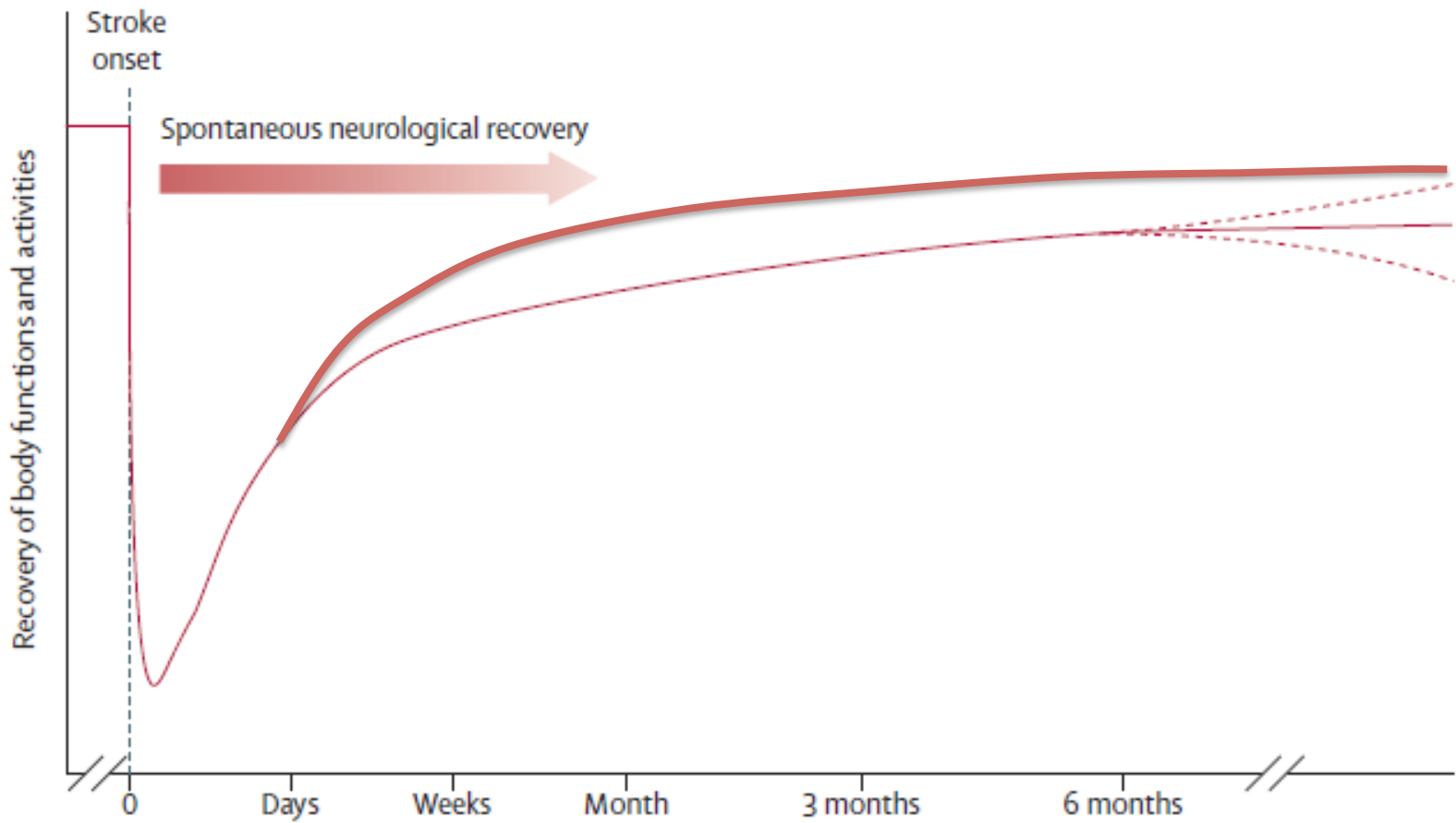Hvad ved vi efter AVERT studiet?

Jørgen Feldbæk Nielsen, professor,overlæge dr.med.

Stroke onset

Spontaneous neurological recovery

Recovery of body functions and activities

0   Days   Weeks   Month   3 months   6 months

Lancet 2011; 377: 1693–702

Recovery of body functions and activities

Stroke onset

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Spontaneous neurological recovery

Lancet 2011; 377: 1693–702

Efficacy and safety of very early mobilisation within 24 h of stroke onset (AVERT): a randomised controlled trial

The AVERT Trial Collaboration group*

Summary

Background Early mobilisation after stroke is thought to contribute to the effects of stroke-unit care; however, the intervention is poorly defined and not underpinned by strong evidence. We aimed to compare the effectiveness of frequent, higher dose, very early mobilisation with usual care after stroke.

*Members listed in the ap

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Prespecified dose-response analysis for A Very Early Rehabilitation Trial (AVERT)

OPEN ▲

ABSTRACT

Objective: Our prespecified dose-response analyses of A Very Early Rehabilitation Trial (AVERT) aim to provide practical guidance for clinicians on the timing, frequency, and amount of mobilization following acute stroke.

Methods: Eligible patients were aged ≥18 years, had confirmed first (or recurrent) stroke, and were admitted to a stroke unit within 24 hours of stroke onset. Patients were randomized to receive very

Efficacy and safety of very early mobilisation within 24 h of stroke onset (AVERT): a randomised controlled trial

The AVERT Trial Collaboration group*

	Very early mobilisation (n=1054)	Usual care (n=1050)
Recruitment region		
Australia and New Zealand	617 (59%)	626 (60%)
Asia	126 (12%)	125 (12%)
UK	311 (29%)	299 (28%)
Age (years)	72·3 (62·3–80·3)	72·7 (63·4–80·4)
<65	331 (31%)	298 (28%)
65–80	448 (43%)	481 (46%)
>80	275 (26%)	271 (26%)

	Very early mobilisation (n=1054)	Usual care (n=1050)
(Continued from previous column)		
Lacunar infarct	255 (24%)	268 (26%)
Intracerebral haemorrhage	142 (14%)	116 (11%)
rtPA treatment		
Yes	247 (23%)	260 (25%)
Baseline walking (Mobility Scale for Acute Stroke walking score)		
Independent	439 (42%)	416 (40%)
Supervised or assisted	522 (49%)	538 (51%)
Unable to walk	91 (9%)	96 (9%)
Unknown	2 (<1%)	0 (0%)

	Very early mobilisation (n=1054)	Usual care (n=1050)	p value	Median shift (95% CI)
Time to first mobilisation (h)	18·5 (12·8–22·3; n=1042*)	22·4 (16·5–29·3; n=1036*)	<0·0001	4·8 (4·1–5·7)
Frequency per person†	6·5 (4·0–9·5)	3 (2·0–4·5)	<0·0001	3 (3–3·5)
Daily amount per person (min)‡	31 (16·5–50·5)	10 (0–18)	<0·0001	21·0 (20–22·5)
Total amount per person (min)§	201·5 (108–340)	70 (32–130)	<0·0001	117 (107–128)

	Very early mobilisation (n=1038*)	Usual care (n=1045*)	Adjusted analysis		Unadjusted analysis	
			OR, generalised OR, or HR† (95% CI)	p value	OR generalised OR, or HR† (95% CI)	p value
Primary						
Favourable outcome‡	480 (46%)	525 (50%)	0·73 (0·59–0·90)	0·004	0·85 (0·72–1·0)	0·068
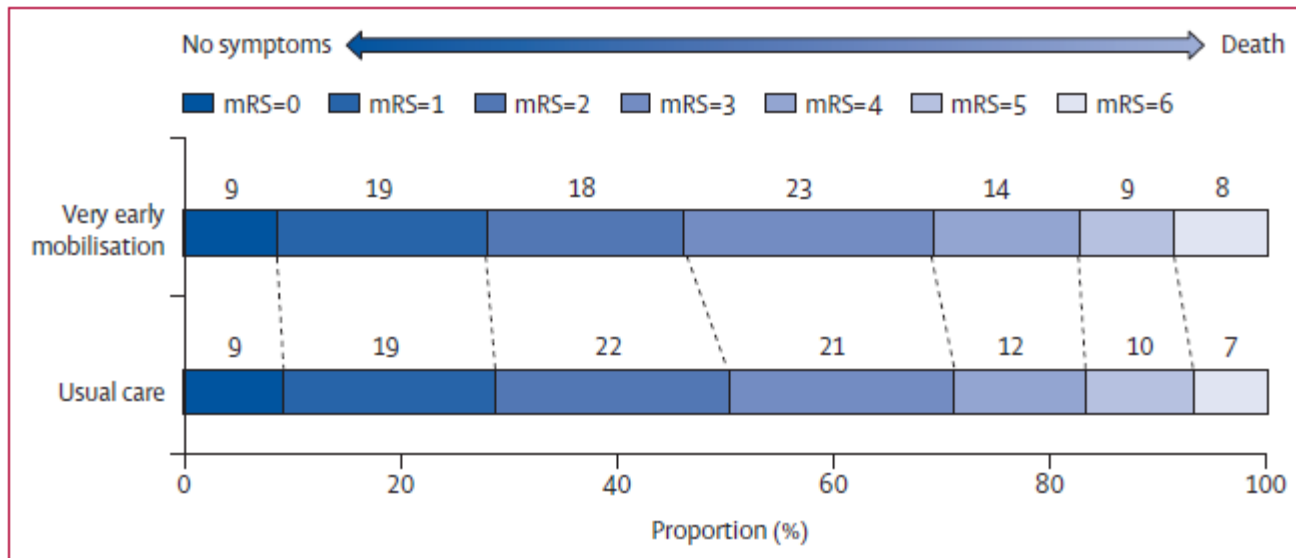
mRS = 0	Helt symptomfri
mRS = 1	Ikke betydende handikap på trods af lette symptomer; klarer alle sædvanlige opgaver og aktiviteter
mRS = 2	Lettere handikap; klarer ikke samtlige tidligere udførte aktiviteter, men er i stand til at klare sig selv uden hjælp til personlige gøremål fra andre personer (må godt have praktisk hjælp til f.eks. rengøring og indkøb)
mRS = 3	Moderat handikap; har brug for nogen hjælp til personlige gøremål (f.eks. påklædning eller hjælp til at klare en bankforretning), men er i stand til at gå uden hjælp fra andre personer (må godt bruge stok eller rollator)
mRS = 4	Moderat til svært handikap; ude af stand til at gå uden hjælp fra andre personer, og ude af stand til at klare personlige behov uden hjælp fra andre personer
mRS = 5	Svært handikap; sengeliggende, inkontinent, konstant pleje- og opmærksomhedskrævende
mRS = 6	Død

Prespecified dose-response analysis for A Very Early Rehabilitation Trial (AVERT)
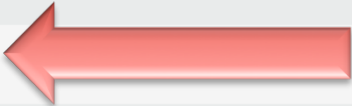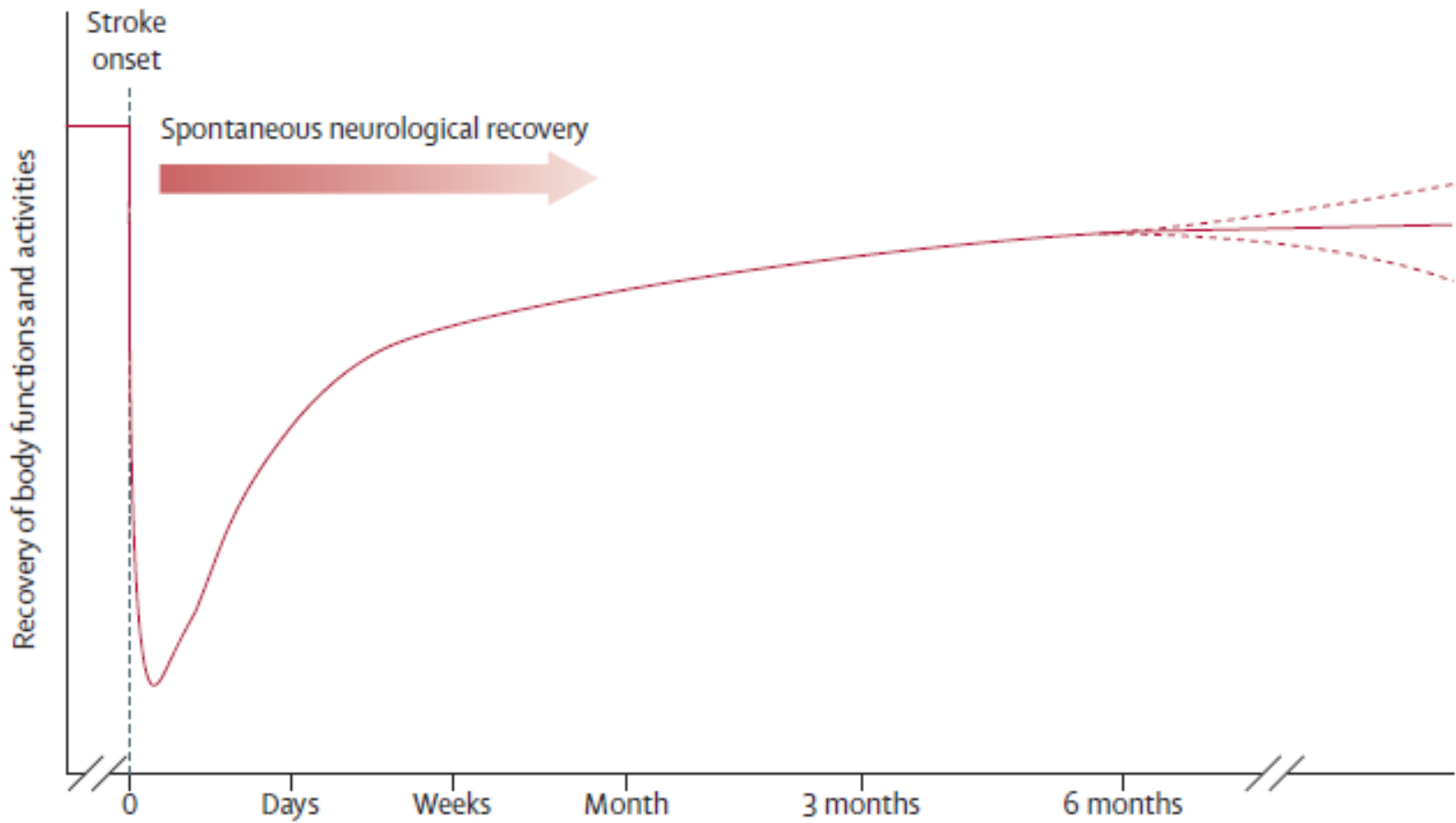
OPEN ▲

Neurology® 2016;86:1-8

Julie Bernhardt, PhD
Leonid Churilov, PhD
Fiona Ellery, BAppSci
(Nurs)

ABSTRACT

Objective: Our prespecified dose-response analyses of A Very Early Rehabilitation Trial (AVERT) aim to provide practical guidance for clinicians on the timing, frequency, and amount of mobilization following acute stroke.

Table 3   Effect of intervention characteristics on favorable outcome (mRS 0-2) and unassisted walking

Efficacy	Favorable outcome (mRS 0-2)		Walking unassisted 50 meters			
	OR (95% CI)	p Value	Binary OR (95% CI)	p Value	Cox hazard ratio (95% CI)	p Value
Model 1						
Time to first mobilization (per extra hour)	0.99 (0.98-1.0)	0.036	1.0 (0.99-1.0)	0.40	0.99 (0.98-0.99)	<0.001
Frequency, median daily sessions[a] (per one extra session)	1.13 (1.09-1.18)	<0.001	1.66 (1.53-1.80)	<0.001		<0.001
Daily amount, median (per extra 5 minutes)	0.94 (0.91-0.97)	<0.001	0.85 (0.81-0.89)	<0.001	0.96 (0.94-0.97)	<0.001

Stroke onset

Spontaneous neurological recovery

Recovery of body functions and activities

0 | Days | Weeks | Month | 3 months | 6 months
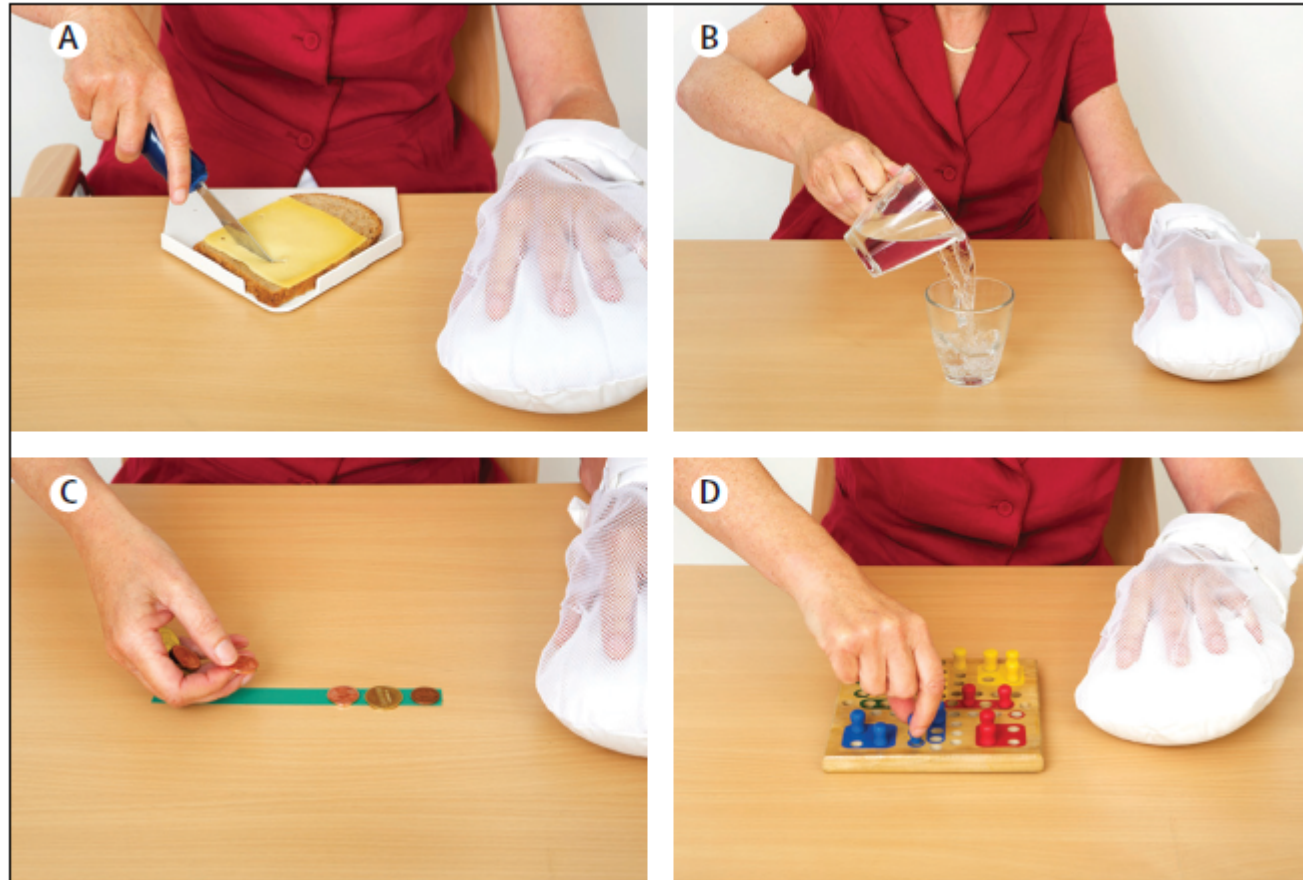
Lancet 2011; 377: 1693–702
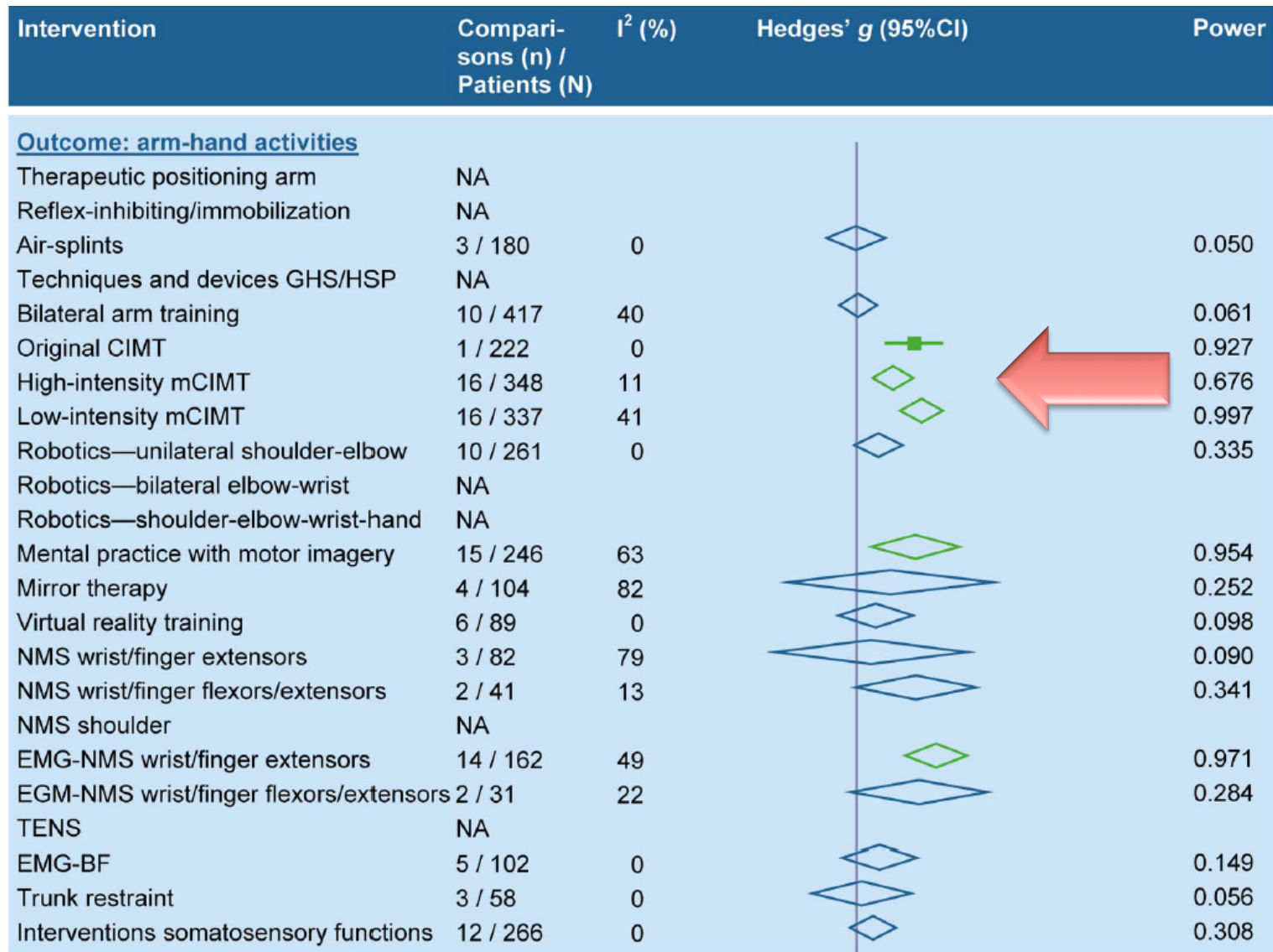
Fysisk rehabilitering

Fysisk rehabilitering - principper

- Opgave specifik – man bliver god til det man træner

- Kontekst-afhængig

- Høj intensitet – mange repetitioner

- Motivation

- Begynd tidlig

Constraint-induced movement therapy after stroke

Gert Kwakkel, Janne M Veerbeek, Erwin E H van Wegen, Steven L Wolf

Intervention	Compari-sons (n) / Patients (N)	I^2 (%)	Hedges' g (95%CI)	Power
Outcome: arm-hand activities				
Therapeutic positioning arm	NA			
Reflex-inhibiting/immobilization	NA			
Air-splints	3 / 180	0		0.050
Techniques and devices GHS/HSP	NA			
Bilateral arm training	10 / 417	40		0.061
Original CIMT	1 / 222	0		0.927
High-intensity mCIMT	16 / 348	11		0.676
Low-intensity mCIMT	16 / 337	41		0.997
Robotics—unilateral shoulder-elbow	10 / 261	0		0.335
Robotics—bilateral elbow-wrist	NA			
Robotics—shoulder-elbow-wrist-hand	NA			
Mental practice with motor imagery	15 / 246	63		0.954
Mirror therapy	4 / 104	82		0.252
Virtual reality training	6 / 89	0		0.098
NMS wrist/finger extensors	3 / 82	79		0.090
NMS wrist/finger flexors/extensors	2 / 41	13		0.341
NMS shoulder	NA			
EMG-NMS wrist/finger extensors	14 / 162	49		0.971
EGM-NMS wrist/finger flexors/extensors	2 / 31	22		0.284
TENS	NA			
EMG-BF	5 / 102	0		0.149
Trunk restraint	3 / 58	0		0.056
Interventions somatosensory functions	12 / 266	0		0.308

Citation: Veerbeek JM, van Wegen E, van Peppen R, van der Wees PJ, Hendriks E, et al. (2014) What Is the Evidence for Physical Therapy Poststroke? A Systematic Review and Meta-Analysis. PLoS ONE 9(2): e87987. doi:10.1371/journal.pone.0087987

Physical rehabilitation approaches for the recovery of function and mobility following stroke (Review)

Pollock A, Baer G, Campbell P, Choo PL, Forster A, Morris J, Pomeroy VM, Langhorne P

Hvad begrænser os?

- træthed

- depression

- kognitive følger

- co-morbiditet

patienten/borgeren

- mangel på viden

- implementering er svær

- manglende sammenhæng over sektorgrænser

sundhedsvæsenet

- dristighed til at gøre op med gamle vaner

....men vi har et problem med de kognitive følger...

Post-stroke cognitive impairment is common even after successful clinical recovery

H. Jokinen, S. Melkas, R. Ylikoski, T. Pohjasvaara, M. Kaste, T. Erkinjuntti and M. Hietanen

Clinical Neurosciences, Neurology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

Background and purpose: Cognitive impairment is common after stroke, but the prevalence and long-term significance of the diverse neuropsychological deficits on functional outcome are still not well known. The frequency and prognostic value of domain-specific cognitive impairments were investigated in a large cohort of ischaemic stroke patients.

Methods: Consecutive patients (n = 409), aged 55–85 years, from the acute stroke unit of the Helsinki University Hospital, Finland, were evaluated with extensive clinical and neuropsychological assessments 3 months post-stroke. Impairments within nine cognitive domains were determined according to age-appropriate normative data from a random healthy population. Functional disability was evaluated with the modified Rankin scale (mRS) 3 and 15 months post-stroke.

Results: In all, 83% patients showed impairment in at least one cognitive domain, whereas 50% patients were impaired in multiple (≥3) domains. In

Table 2. Neuropsychological test battery of the Helsinki Stroke Aging Memory Study

Executive functions and attention

    Trail making test, parts A and B

    Stroop test, colour naming and interference

    Wisconsin card sorting test

    Verbal fluency, phonemic and semantic

    Digit span, forward and backward

Memory

    WMS-R logical memory, story A, immediate and delayed recall

    WMS-R visual reproduction, immediate and delayed recall

    Fuld object memory evaluation, 10-item learning test, 5 trials and delayed recall

Visuoconstructional and spatial functions

    WAIS-R block design

    Figure copying test

    Clock drawing test

Abstract thinking

    WAIS-R similarities

Aphasia

    Token test

    Boston naming test

    Boston diagnostic aphasia examination, overall speech evaluation

Reading and writing

    Samples

Arithmetic

    Arithmetic operations
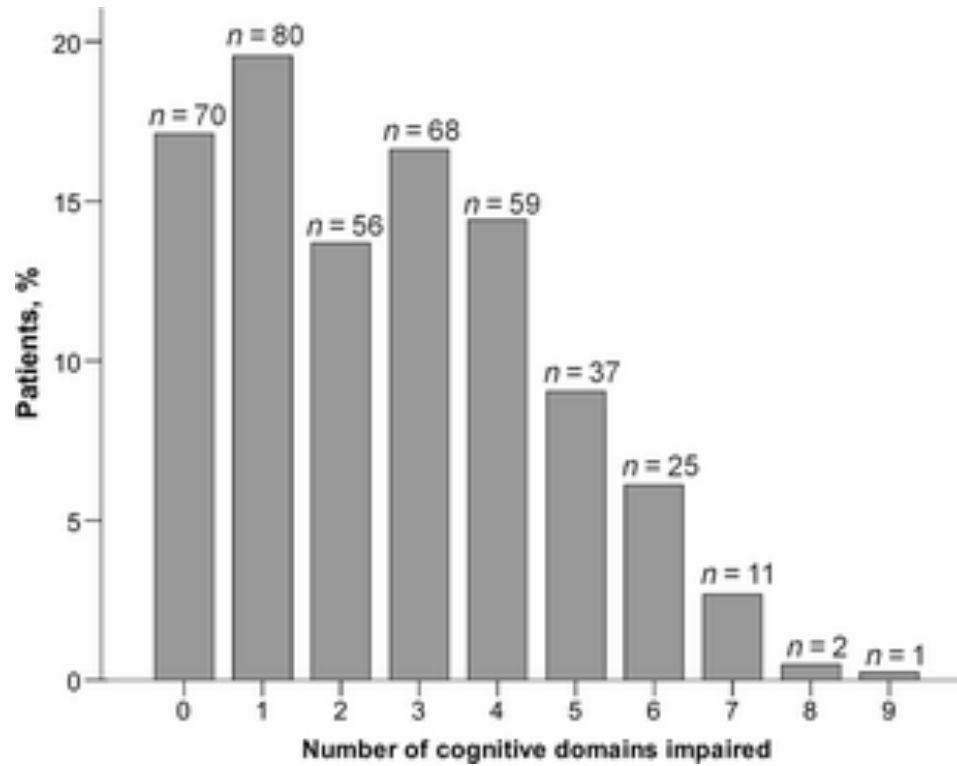
Neglect

    Bells test

Agnosia

    Poppelreuter

Table 3. Frequencies of impairment in each cognitive domain in the whole cohort and in a subgroup of patients with excellent clinical recovery (mRS = 0–1) 3 months after ischaemic stroke in the Helsinki Stroke Aging Memory Study

Cognitive domain	n (%)	
	All patients n = 409	Patients with mRS = 0–1 n = 152
Memory functions	227 (60)	77 (52)
Visuoconstructional and spatial functions	216 (55)	54 (36)
Executive functions and attention	181 (49)	52 (34)
Aphasia	114 (29)	23 (15)
Reading and writing	112 (30)	16 (11)
Abstract reasoning	106 (29)	26 (17)
Arithmetic	71 (20)	12 (8)
Neglect	29 (8)	2 (1)
Agnosia	13 (3)	1 (1)

Table 4. Cognitive impairments 3 months post-stroke as predictors of functional dependence (modified Rankin Scale >2) at 15-month follow-up in the Helsinki Stroke Aging Memory Study

Impairment	Logistic regression	
	OR (*P* value)	95% CI for OR
Memory functions	2.2 (0.008)	1.2–3.9
Visuoconstructional and spatial functions	5.1 (<0.001)	2.7–9.1
Executive functions and attention	3.2 (<0.001)	1.8–5.7
Aphasia	2.1 (0.017)	1.1–3.9
Reading and writing	2.3 (0.011)	1.2–4.3
Abstract reasoning	2.3 (0.006)	1.3–4.2
Arithmetic	1.9 (0.063)	1.0–3.9

Statistical analyses are adjusted for age, sex, years of education and stroke severity (National Institutes of Health Stroke Scale score). OR, odds ratio; CI, confidence interval.