

Effects of cognitive rehabilitation – specific or general

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- Key
- Apple
- Mach-box
- Cat
- Bread
- Giraffe
- Man



?

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- **Cognition** is a unifying concept that usually refers to conscious mental activities encompassing processes as attention, perception, memory, problem solving, reasoning and decision-making.

Cognitive deficits after stroke:

- Cognitive problems are frequent after stroke
- Up to 80 % experience one or more cognitive symptoms at some point their course of illness

Persistent cognitive symptoms :

- Hampers the patients ability to return to work and participate in social activities.
- Negative consequences for family and friends
- Socio-economic consequences

General stimulation vs specific intervention

Specific cognitive rehabilitation:

- ”systematic, functionally orientated service of therapeutic activities that is based on assessment and understanding of the patient's brain behavioural deficits”.

Cicerone 2005

Effect of cognitive rehabilitation:



Review article (meta-analysis)
Evidence-Based Cognitive Rehabilitation: Updated Review of the Literature From 2003 Through 2008

Keith D. Cicerone PhD^{a,*,#}, Donna M. Langenbahn PhD^b, Cynthia Braden MA, CCC-SLP^c, James F. Malec PhD^d, Kathleen Kalmir PhD^a, Michael Fraas PhD^a, Thomas Felcetti PhD^f, Linda Laatsch PhD^g, J. Preston Harley PhD^h, Thomas Bergquist PhDⁱ, Joanne Azulay PhD^j, Joshua Cantor PhD^k, Teresa Ashman PhD^l



EFNS guidelines on cognitive rehabilitation: report of an EFNS task force

Members of the Task Force on Cognitive Rehabilitation, S. F. Cappa, T. Benke, S. Clarke, B. Rossi, B. Stemmer, C. M. van Heugten

First published: 26 August 2005 Full publication history



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Cognitive rehabilitation for memory deficits after stroke

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Authors:
das Nair R, Cogger H, Worthington E, Lincoln NB

Primary Review Group:
Stroke Group

Review question

We reviewed the evidence for the effectiveness of cognitive rehabilitation for memory problems in people with stroke.

Background

People often struggle with memory problems following stroke and this can lead to difficulties in everyday life. The degree and kind of memory problems, mood changes, and performance of everyday activities can vary widely depending on many factors, including the location of the stroke in the brain, severity, age, and the previous health of the person experiencing a stroke.



Who is talking about this article?



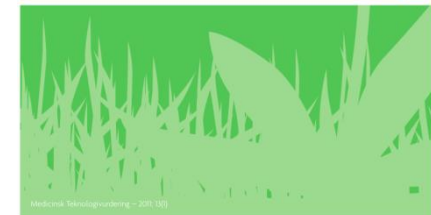
Sundhedsstyrelsen



HJERNESKADEREHABILITERING
– en medicinsk teknologivurdering

HOVEDRAPPORT

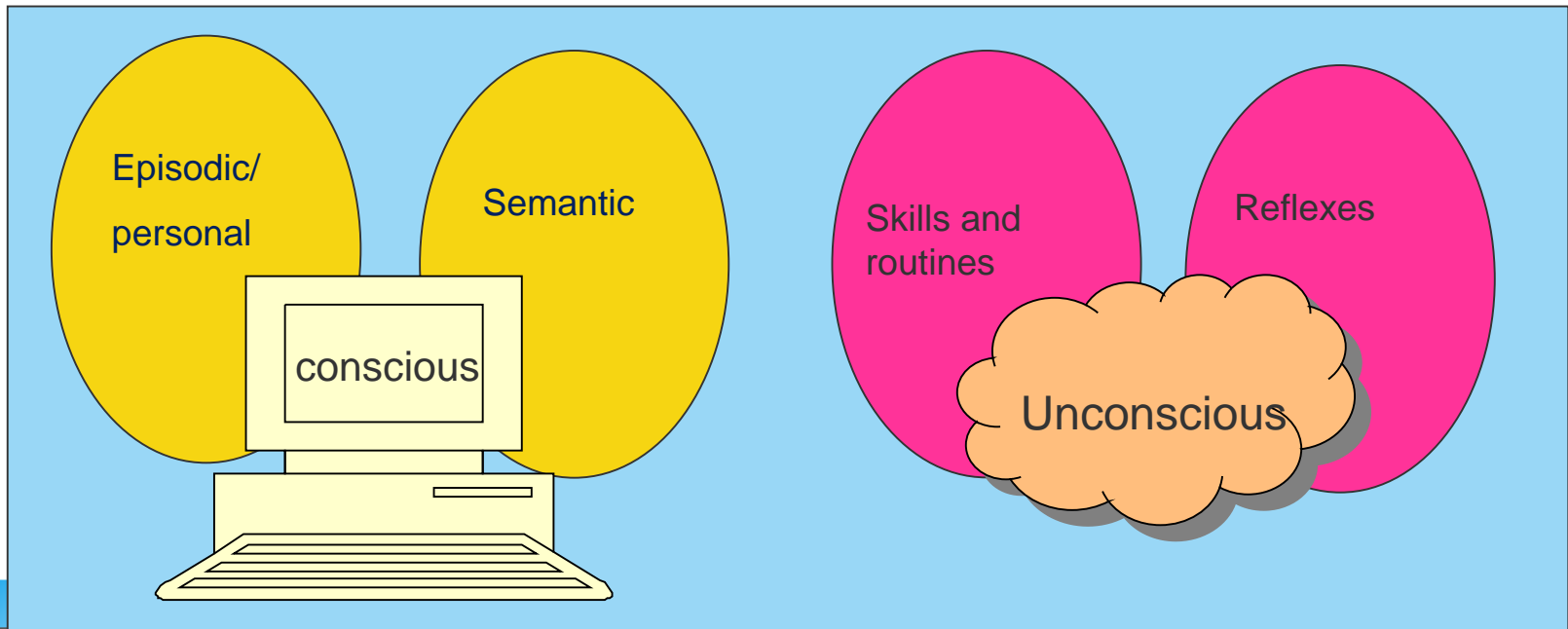
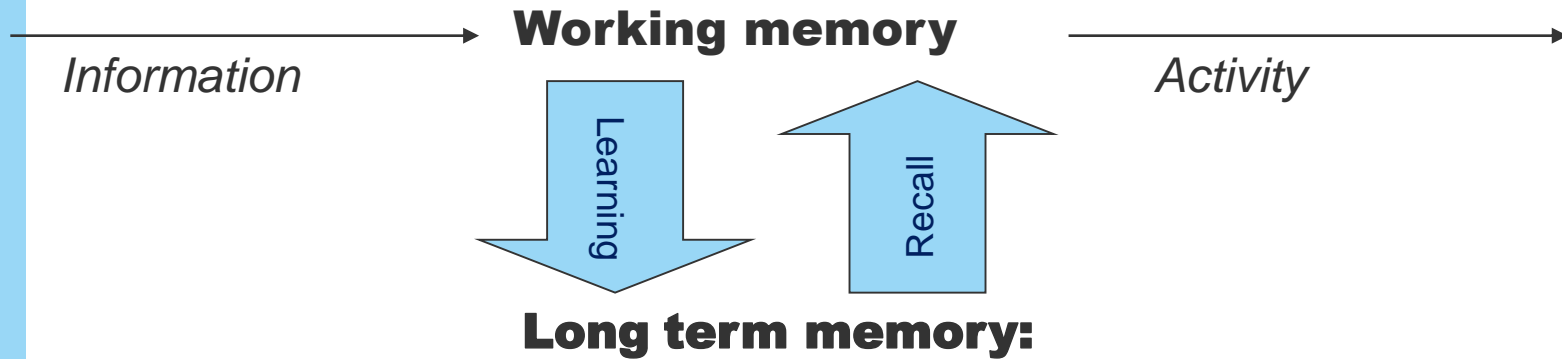
2011



Cognitive rehabilitation for memory deficits after stroke



Human memory:



Localization of memory function:

Frontallobe:

Working memory

Putamen:

Procedural

Amygdala:

Traumatic
memory

Temporallobe

:

Long term storage

Nucleus caudatus:

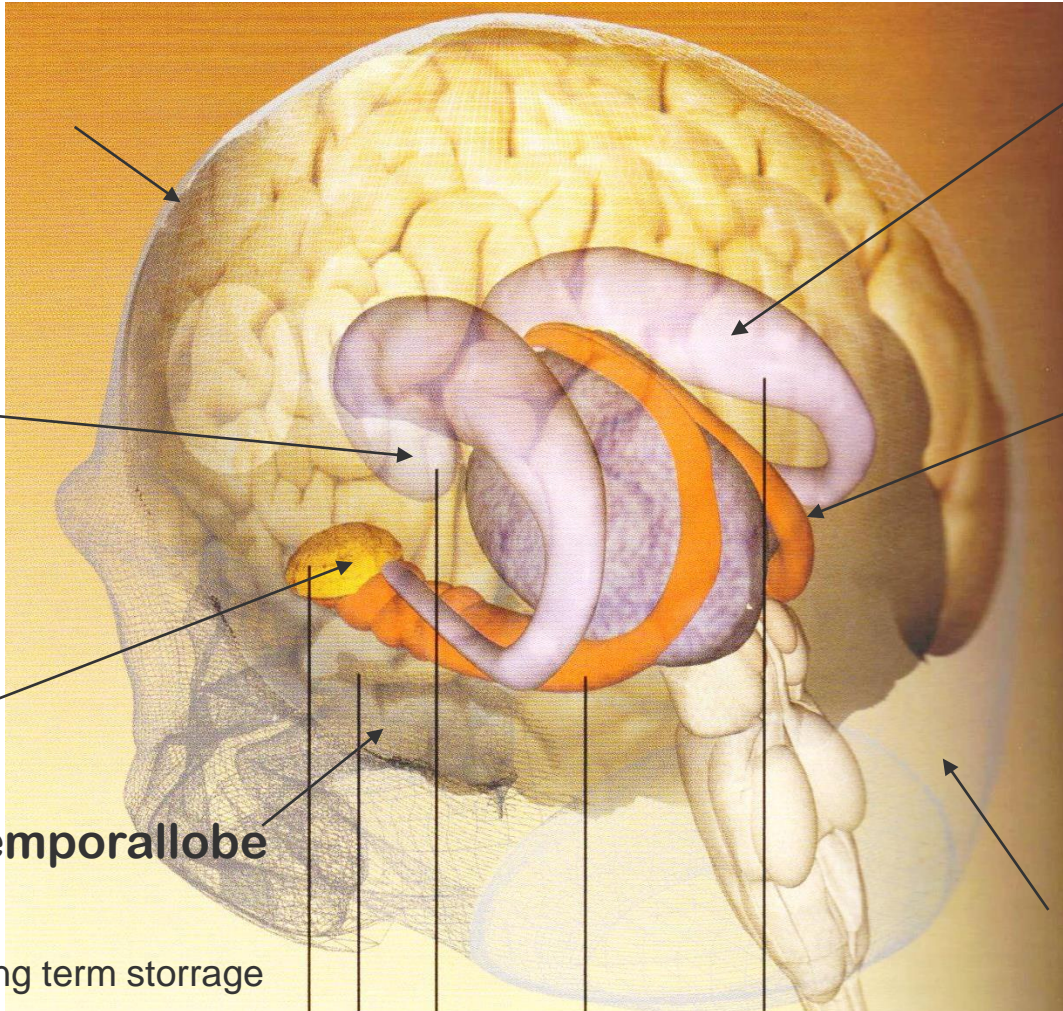
Instincts, procedures

Hippocampus:

Short term dynamic
storage and recall

Cerebellum:

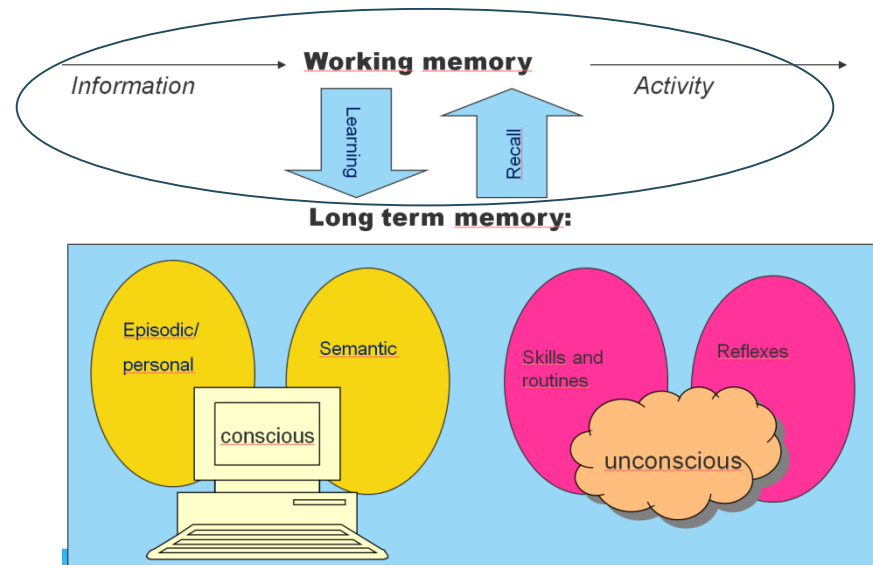
Motor learning



Stroke and memory:

The ability to learn and remember is preserved –

but the capacity is reduced



Evidence for effect of specific memory rehabilitation?

- Stroke patients are able to use compensatory strategies, and/or compensatory technologies under controlled conditions
- No evidence for transfer
- No evidence for long-term effect

Discussion

- Few studies of good quality
- Number of participants (514 (!) participants in the Cochrane Stroke Studygroup 2016)
- Effect on functional measures – effect on activity and participation is usually not measured
- Low doses and short intervention period

Discussion: Long term effect?

- Intervention period: 2 - 10 weeks
- Follow up: 1 -7 month

To conclude:

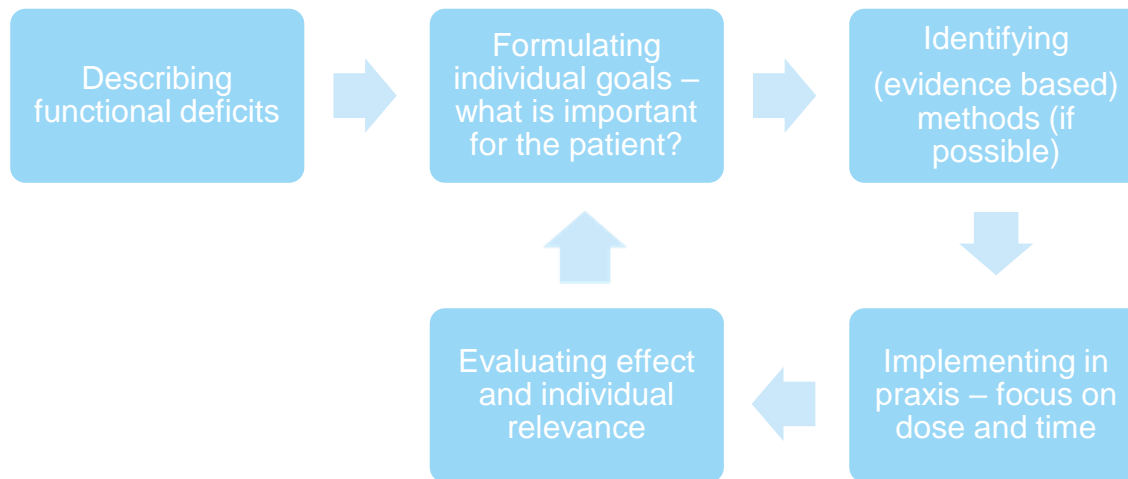
- Many aspects of memory function can be restored by internal an external memory aids
 - Training has to be individually tailored
 - Adapted to co- existing cognitive, physical or mental functional deficits

Future perspectives

- Need for studies of better quality
- More participant- longer studie periode
- Need for studies focusing on transfere
- Need for studies focusing on longterm effect – actual change of habbits in everyday life

Take home message to the clinic:

- Implementation model :



Remember to remember

