

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club location	Flinders Stroke
JC Facilitator	Emily Daley
JC Discipline	Occupational Therapy

Background

We are interested in constraint induced movement therapy (CIMT) following its strong recommendation in the 2017 NSF guidelines.

Clinical Scenario

N/A

Review Question/PICO/PACO

- P:** Adult acute stroke survivors
- I:** Constraint induced movement therapy (CIMT)
- C:** Any intervention
- O:** Upper limb function

Article/Paper

Corbetta D, Sirtori V, Castellini G, Moja L, Gatti R. Constraint-induced movement therapy for upper extremities in people with stroke. The Cochrane Library. 2015 Jan 1.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).

Article Methodology: **Systematic Review**

Click [here](#) to access critical appraisal tool



University of
South Australia

International Centre for
Allied Health Evidence

iCAHE

A member of the Sansam Institute

Ques No.	Yes	Can't Tell	No	Comments
1	✓			Did the review address a clearly focused question? To assess the efficacy of CIMT, modified CIMT (mCIMT), or forced use (FU) for arm management in people with hemiparesis after stroke
2	✓			Did the authors look for the appropriate sort of papers? Included studies were randomised control trials (RCTs) and quasi-RCTs comparing CIMT, mCIMT or FU with other rehabilitative techniques, or none. Is it worth continuing? YES
3	✓			Do you think the important, relevant studies were included? We searched the Cochrane Stroke Group trials register (last searched June 2015), the Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library Issue 1, 2015), MEDLINE (1966 to January 2015), EMBASE (1980 to January 2015), CINAHL (1982 to January 2015), and the Physiotherapy Evidence Database (PEDro; January 2015).
4	✓			Did the review's authors do enough to assess the quality of the included studies? Three review authors independently assessed methodological quality and risk of bias. Risk of bias in the included studies using the criteria in the Cochrane Handbook for Systematic Reviews of Interventions. Publication bias by means of visual inspection of funnel plots for signs of asymmetry.
5	✓			If the results of the review have been combined, was it reasonable to do so? In consideration of the clinical heterogeneity among studies, which related to variability in the interventions included and in the patient case-mix, we considered it appropriate to perform random-effects meta-analyses to incorporate heterogeneity, except within subgroup analyses.
6				What are the overall results of the reviews? We included 42 studies involving 1453 participants. The trials included participants who had some residual motor power of the paretic arm, the potential for further motor recovery and with limited pain or spasticity, but tended to use the limb little, if at all. The majority of studies were underpowered (median number of included participants was 29) and we cannot rule out small-trial bias. Eleven trials (344 participants) assessed disability immediately after the intervention, indicating a non-significant standard mean difference (SMD) 0.24 (95% confidence interval (CI) - 0.05 to 0.52) favouring CIMT compared with conventional treatment. For the most frequently reported outcome, arm motor function (28 studies involving 858 participants), the SMD was 0.34 (95% CI 0.12 to 0.55) showing a significant effect (P value 0.004) in favour of CIMT. Three studies involving 125 participants explored disability after a few months of follow-up and found no significant difference, SMD -0.20 (95% CI - 0.57 to 0.16) in favour of conventional treatment. CIMT is a multi-faceted intervention where restriction of the less affected limb is accompanied by increased exercise tailored to the person's capacity. We found that CIMT was associated with limited improvements in motor impairment and motor function, but that these benefits did not convincingly reduce disability. This differs from the result of our previous meta-analysis where there was a suggestion that CIMT might be superior to traditional rehabilitation. Information about the long-term effects of CIMT is scarce. Further trials studying the relationship between participant characteristics and improved outcomes are required.

CONTACTS

www.unisa.edu.au/cahe
iCAHE@unisa.edu.au
Telephone: +61 8 830 22099
Fax: +61 8 830 22853

University of South Australia
GPO Box 2471
Adelaide SA 5001
Australia

CRICOS Provider Number
00121B



University of
South Australia

International Centre for
Allied Health Evidence

iCAHE

A member of the Sansom Institute

The International Centre for Allied Health Evidence (iCAHE)

For more information on CAHE Journal Clubs email iCAHEjournalclub@unisa.edu.au
To receive CAHE updates register online at www.unisa.edu.au/cahe

CONTACTS

www.unisa.edu.au/cahe
 iCAHE@unisa.edu.au
 Telephone: +61 8 830 22099
 Fax: +61 8 830 22853

University of South Australia
 GPO Box 2471
 Adelaide SA 5001
 Australia

CRICOS Provider Number
 00121B



University of
 South Australia

International Centre for
 Allied Health Evidence

iCAHE

A member of the Sansom Institute

7				<p>How precise are the results? 95% confidence intervals and P values were reported which indicates precision.</p>
8	Journal Club to discuss			<p>Can the results be applied to the local population? CONTEXT ASSESSMENT (please refer to attached document)</p> <ul style="list-style-type: none"> - Infrastructure - Available workforce (? Need for substitute workforce?) - Patient characteristics - Training and upskilling, accreditation, recognition - Ready access to information sources - Legislative, financial & systems support - Health service system, referral processes and decision-makers - Communication - Best ways of presenting information to different end-users - Availability of relevant equipment - Cultural acceptability of recommendations - Others
9				<p>Were all important outcomes considered?</p>
10				<p>Are the benefits worth the harms and costs?</p>
11				<p>What do the study findings mean to practice (i.e. clinical practice, systems or processes)?</p>
12				<p>What are your next steps? ADOPT, CONTEXTUALISE, ADAPT And then (e.g. evaluate clinical practice against evidence-based recommendations; organise the next four journal club meetings around this topic to build the evidence base; organize training for staff, etc.)</p>
13				<p>What is required to implement these next steps?</p>