

# Effectiveness of Memory Rehabilitation After Stroke

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Memory problems are a common complaint for people who have had a stroke. Memory rehabilitation programs either attempt to retrain lost or poor memory functions or teach patients strategies to cope with them. These programs are a standard part of rehabilitation in many settings. However, the effectiveness of memory rehabilitation has not been established using randomized trials.

We searched the Cochrane Stroke Group Trials Register (last searched September 2006). In addition, we searched the following electronic databases: the Cochrane Central Register of Controlled Trials (The Cochrane Library Issue 2, 2005), MEDLINE (1966 to June 2005), EMBASE (1980 to June 2005), CINAHL (1982 to June 2005), PsycINFO (1980 to July 2006), AMED (1985 to June 2005), British Nursing Index (1985 to June 2005), CAB Abstracts (1973 to May 2005), and the National Research Register (June 2006). We hand-searched relevant journals and searched citation lists. Two review authors selected trials for inclusion, assessed quality, and extracted data. Controlled trials of memory retraining in stroke were selected. We excluded studies with mixed etiology groups unless 75% or more of the participants had a stroke or separate stroke data were available. The primary outcomes were functional outcome measures (including quality of life); and the secondary outcomes were objective measures, subjective measures, and observer-rated measures of memory.

Two trials were included. One study compared the effectiveness of a mnemonic strategy treatment group with a “drill and practice” control, whereas the other compared the effectiveness of an imagery mnemonics program with a “pragmatic” memory rehabilitation control program. The methodological quality of included studies was poor. Neither study published the method used to generate the intervention assignment schedule or details of allocation concealment. Outcome assessments were not conducted blind to treatment

allocation. Neither study reported the details recommended by the CONSORT guidelines.

Outcome data were available from 2 trials of 18 participants. Formal meta-analysis was not possible, but individual results were summarized for the immediate and long-term effects on the primary and secondary outcomes. Neither trial included any functional outcome (or quality of life) measure. Both studies included objective memory tests as outcome measures. These were specific to the 2 studies and no common outcome measures were used. There were no significant effects of treatment on standardized memory assessments. Different subjective measures of memory were used in the 2 studies and no significant treatment effects were observed on immediate or long-term follow-up. One study used an observer-rated measure of memory function, but there was no evidence of treatment effectiveness on the immediate or long-term outcomes on this scale.

Although positive results of memory rehabilitation have been reported in uncontrolled studies, this review concluded that there was no evidence to support or refute the effectiveness of memory rehabilitation on functional outcomes or measures of memory after stroke. There is a need for more robust, well-designed, and better-reported trials of memory rehabilitation using common standardized outcome measures. Any clinical service provision should be delivered in the context of formal evaluation.

## Disclosures

None.

## Reference

1. Nair RD, Lincoln NB. Cognitive rehabilitation for memory deficits following stroke. *Cochrane Database Syst Rev*. 2007; Issue 3. Art. No.: CD002293. DOI: 10.1002/14651858.CD002293.pub2.

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