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Occupational therapy for adults with problems in activities of daily living after stroke.
Cochrane Database of Systematic Reviews 2017, Issue 7. Art. No.: CD003585.
DOI: 10.1002/14651858.CD003585.pub3.

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[Intervention Review]

Occupational therapy for adults with problems in activities of daily living after stroke

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Editorial group: Cochrane Stroke Group.
Publication status and date: New search for studies and content updated (conclusions changed), published in Issue 7, 2017.

Citation: Legg LA, Lewis SR, Schofield-Robinson OJ, Drummond A, Langhorne P. Occupational therapy for adults with problems in activities of daily living after stroke. *Cochrane Database of Systematic Reviews* 2017, Issue 7. Art. No.: CD003585. DOI: 10.1002/14651858.CD003585.pub3.

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ABSTRACT

Background

A stroke occurs when the blood supply to part of the brain is cut off. Activities of daily living (ADL) are daily home-based activities that people carry out to maintain health and well-being. ADLs include the ability to: eat and drink unassisted, move, go to the toilet, carry out personal hygiene tasks, dress unassisted, and groom. Stroke causes impairment-related functional limitations that may result in difficulties participating in ADLs independent of supervision, direction, or physical assistance.

For adults with stroke, the goal of occupational therapy is to improve their ability to carry out activities of daily living. Strategies used by occupational therapists include assessment, treatment, adaptive techniques, assistive technology, and environmental adaptations. This is an update of the Cochrane review first published in 2006.

Objectives

To assess the effects of occupational therapy interventions on the functional ability of adults with stroke in the domain of activities of daily living, compared with no intervention or standard care/practice.

Search methods

For this update, we searched the Cochrane Stroke Group Trials Register (last searched 30 January 2017), the Cochrane Controlled Trials Register (*The Cochrane Library*, January 2017), MEDLINE (1946 to 5 January 2017), Embase (1974 to 5 January 2017), CINAHL (1937 to January 2017), PsycINFO (1806 to 2 November 2016), AMED (1985 to 1 November 2016), and Web of Science (1900 to 6 January 2017). We also searched grey literature and clinical trials registers.

Selection criteria

We identified randomised controlled trials of an occupational therapy intervention (compared with no intervention or standard care/practice) where people with stroke practiced activities of daily living, or where performance in activities of daily living was the focus of the occupational therapy intervention.

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Data collection and analysis

Two review authors independently selected trials, assessed risk of bias, and extracted data for prespecified outcomes. The primary outcomes were the proportion of participants who had deteriorated or were dependent in personal activities of daily living and performance in activities of daily living at the end of follow-up.

Main results

We included nine studies with 994 participants in this update. Occupational therapy targeted towards activities of daily living after stroke increased performance scores (standardised mean difference (SMD) 0.17, 95% confidence interval (CI) 0.03 to 0.31, P = 0.02; 7 studies; 749 participants; low-quality evidence) and reduced the risk of poor outcome (death, deterioration or dependency in personal activities of daily living) (odds ratio (OR) 0.71, 95% CI 0.52 to 0.96; P = 0.03; 5 studies; 771 participants; low-quality evidence). We also found that those who received occupational therapy were more independent in extended activities of daily living (OR 0.22 (95% CI 0.07 to 0.37); P = 0.005; 5 studies; 665 participants; low-quality evidence). Occupational therapy did not influence mortality (OR: 1.02 (95% CI 0.65 to 1.61); P = 0.93; 8 studies; 950 participants), or reduce the combined odds of death and institutionalisation (OR 0.89 (95% CI 0.60 to 1.32); P = 0.55; 4 studies; 671 participants), or death and dependency (OR 0.89 (95% CI 0.64 to 1.23); P = 0.47; 4 trials; 659 participants). Occupational therapy did not improve mood or distress scores (OR 0.08 (95% CI -0.09 to 0.26); P = 0.35; 4 studies; 519 participants; low-quality evidence). There were insufficient data to determine the effects of occupational therapy on health-related quality of life. We found no studies of consenting carers prior to study participation and therefore there were no carer-related outcomes in our review. There were insufficient data to determine participants' and carers' satisfaction with services.

Using GRADE, the quality of evidence was low. The major limitation was the number of studies at unclear risk of selection bias and an inevitable high risk of performance and detection bias, as both participants and occupational therapists could not be blinded to the intervention. In addition, there was a sparseness of data for our outcomes of interest and we downgraded the quality of our evidence for these reasons.

Authors' conclusions

We found low-quality evidence that occupational therapy targeted towards activities of daily living after stroke can improve performance in activities of daily living and reduce the risk of deterioration in these abilities. Because the included studies had methodological flaws, this research does not provide a reliable indication of the likely effect of occupational therapy for adults with stroke.

PLAIN LANGUAGE SUMMARY

Occupational therapy for adults with problems in activities of daily living after stroke

Review question

What are the effects of occupational therapy for adults with stroke on activities of daily living?

Background

Different parts of the brain carry out different functions: seeing, sensation, balance, movement, understanding language, behaviour, problem solving, and emotion. A stroke occurs when the blood supply to part of the brain is cut off. If the blood supply is cut off to a part of the brain that carries out a particular function (such as seeing, moving arms and legs, or speaking), then these body parts or body functions will not work as they should.

Activities of daily living (ADLs) are daily household-based activities that people carry out to maintain health and well-being. ADLs include eating and drinking, moving about, going to the toilet, personal hygiene, dressing and undressing, and grooming. When stroke changes how body parts or functions work, then the ability to carry out ADLs can become affected.

For adults with stroke, the goal of occupational therapy is to improve ability to carry out ADLs. Strategies used by occupational therapists include activity-based interventions, adaptive techniques, assistive technology, and environmental adaptations.

Study characteristics

We found nine studies up to January 2017, involving 994 participants, that looked at the benefits of occupational therapy interventions for adults with stroke who had problems with activities of daily living. This is an update of the Cochrane review first published in 2006.

Key result

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We found that occupational therapy for people with stroke can improve their ability to carry out these daily activities and stop them deteriorating in those abilities. We found no evidence that occupational therapy reduced rates of death or the need to be cared for in an institution, or affected mood or distress of the participant. We did not collect data on carer-related outcomes or participant satisfaction with the service.

Quality of the evidence

There were few studies measuring our outcomes of interest and we judged the quality of the evidence to be of low-quality. Many of the studies did not report methods sufficiently clearly and it was not possible to mask the occupational therapy from the person giving or receiving the treatment; this could also have influenced the results in our studies. We did not have sufficient good-quality evidence to be certain of our results and we cannot be certain that future studies will not change these conclusions.

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