

# Computerised speech and language therapy or attention control added to usual care for people with long-term post-stroke aphasia: the Big CACTUS three-arm RCT

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## Plain English summary

### The Big CACTUS three-arm RCT

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## Plain English summary

**A**phasia is a communication disorder that can be caused by a stroke. It affects a person's understanding of spoken words and their talking, reading and writing abilities. Communication may improve months, or years, after a stroke with speech and language therapy. Many patients want more speech and language therapy than the NHS can provide.

The Big CACTUS (clinical and cost-effectiveness of aphasia computer treatment versus usual stimulation or attention control long term post-stroke) trial evaluated the use of speech and language therapy software for people with aphasia to practise finding words independently at home on their own computer or one loaned by the NHS.

People with aphasia who had had a stroke at least 4 months previously were randomly allocated to one of three groups:

1. usual speech and language therapy care
2. daily use of computerised speech and language therapy for 6 months, tailored by a speech and language therapist and supported by a volunteer or speech and language therapy assistant
3. daily completion of puzzles and supportive telephone calls from a researcher to mimic the activity/attention the computerised speech and language therapy group received.

All groups received usual speech and language therapy.

A total of 278 people with aphasia took part in this trial, from 21 UK NHS speech and language therapy departments. They had their strokes between 4 months and 36 years previously. Computerised speech and language therapy enabled more practice (28 hours on average) than usual speech and language therapy (3.8 hours). The computerised speech and language therapy group significantly improved their ability to say words they chose to practise compared with those in the usual speech and language therapy or puzzle book groups.

Although computerised speech and language therapy can help people with aphasia to learn new words for years after stroke, no improvements in conversation or quality of life were seen. The cost-effectiveness for the NHS is still uncertain. However, our best estimate is that it is unlikely to be cost-effective for everyone with aphasia, but it may be cost-effective for people with mild and moderate word-finding difficulties. Next steps will focus on how to encourage use of new words in conversation to have an impact on quality of life.



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