

Home-based therapy for chronic Wernicke's aphasia

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Many stroke survivors experience language impairments (aphasia) beyond 6 months to 1 year after the stroke. Language is a fundamental element in human interaction, and aphasia is independently associated with less participation in rehabilitation programmes, depression and worse quality of life.¹⁻³ Nonetheless, aphasia is not an untreatable condition. Speech therapy can be greatly effective to improve verbal communication, even many years after the stroke.⁴ The problem resides in the fact that not all stroke survivors benefit equally from therapy; some achieve remarkable improvements, whereas others show no response. Moreover, effective treatment usually means several hours over many days of speech training, posing considerable practical demands on the patient and caregivers. So far, a standardised approach for the treatment of aphasia has not been established and there is suboptimal coverage from healthcare plans. As such, many stroke survivors whose communication skills could improve with treatment do not achieve access to therapy. In order to adequately provide stroke survivors with the best chances of recovery (and match advances in acute stroke care with improvements in rehabilitation), there is an outstanding need for more evidence-based approaches for aphasia treatment in chronic stroke survivors.

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The JNNP paper reports the findings from a longitudinal prospective randomised trial by Woodhead *et al*,⁵ which assessed whether home-based therapy ("Earobics") could be enhanced by donepezil. They did not find a positive effect of donepezil on aphasia therapy, but observed that "Earobics" was associated with improvements in speech comprehension. Overall, this study is notable for three important reasons:

1. It further corroborates that speech treatment can be effective in improving communication for chronic aphasia. It also demonstrates that home-based interventions using modern technology (such as phones and tablets) can be used to deliver daily therapy and, perhaps, enhance the effects of clinician-administered therapy.
2. It suggests that the use of donepezil as adjuvant therapy for aphasia after stroke provides no additional benefit to speech therapy.
3. Using magnetoencephalography, the researchers demonstrated that speech comprehension improvements were associated with synaptic strengthening within perilesional networks in the left temporal lobe.

As a typical limitation of rehabilitation trials, the number of participants was relatively small (n=20) and the patient population was of a narrow clinical spectrum. As such, this is a clinical study with evidence level II-III, which is not, by itself, enough to confirm that therapy is 'established as effective' (Class A) based on the American Academy of Neurology Classification of Recommendations. Nonetheless, rehabilitation studies are limited by many practical issues and evidence will likely come from the combined findings from well-designed

and carefully executed studies such as the one reported by Woodhead *et al*.⁵ Their study provides limited but additional evidence as a piece of a larger body of literature supporting behavioural treatment of aphasia. We hope that their findings and, importantly, the potential transformative consequences of aphasia therapy for chronic stroke survivors can further foster support for future studies with the ultimate goal of establishing standardised aphasia therapy.

Competing interests None declared.

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