

1. **The REhabilitation and recovery of peopLE with Aphasia after Stroke (RELEASE) Collaborators and The REhabilitation and recovery of peopLE with Aphasia after Stroke (RELEASE) Collaborators (2021) Predictors of Post stroke Aphasia Recovery; A Systematic Review-Informed Individual Participant Data Meta-Analysis** *Stroke* 52:1778–1787
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Background and Purpose: The factors associated with recovery of language domains after stroke remain uncertain. We described recovery of overall-language-ability, auditory comprehension, naming, and functional-communication across participants' age, sex, and aphasia chronicity in a large, multilingual, international aphasia dataset.

Methods: Individual participant data meta-analysis of systematically sourced aphasia datasets described overall-language ability using the Western Aphasia Battery Aphasia-Quotient; auditory comprehension by Aachen Aphasia Test (AAT) Token Test; naming by Boston Naming Test and functional-communication by AAT Spontaneous-Speech Communication subscale. Multivariable analyses regressed absolute score-changes from baseline across language domains onto covariates identified a priori in randomized controlled trials and all study types. Change-from-baseline scores were presented as estimates of means and 95% CIs. Heterogeneity was described using relative variance. Risk of bias was considered at dataset and meta-analysis level.

Results: Assessments at baseline (median=43.6 weeks post-stroke; interquartile range [4–165.1]) and first-follow-up (median=10 weeks from baseline; interquartile range [3–26]) were available for n=943 on overall-language ability, n=1056 on auditory comprehension, n=791 on naming and n=974 on functional-communication. Younger age (<55 years, +15.4 Western Aphasia Battery Aphasia-Quotient points [CI, 10.0–20.9], +6.1 correct on AAT Token Test [CI, 3.2–8.9]; +9.3 Boston Naming Test points [CI, 4.7–13.9]; +0.8 AAT Spontaneous-Speech Communication subscale points [CI, 0.5–1.0]) and enrolment <1 month post-onset (+19.1 Western Aphasia Battery Aphasia-Quotient points [CI, 13.9–24.4]; +5.3 correct on AAT Token Test [CI, 1.7–8.8]; +11.1 Boston Naming Test points [CI, 5.7–16.5]; and +1.1 AAT Spontaneous-Speech Communication subscale point [CI, 0.7–1.4]) conferred the greatest absolute change-from-baseline across each language domain. Improvements in language scores from baseline diminished with increasing age and aphasia chronicity. Data exhibited no significant statistical heterogeneity. Risk-of-bias was low to moderate-low.

Conclusions: Earlier intervention for post-stroke aphasia was crucial to maximize language recovery across a range of language domains, although recovery continued to be observed to a lesser extent beyond 6 months post-stroke.