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**Sample-size estimation**

* You should state whether an appropriate sample size was computed when the study was being designed
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* If no explicit power analysis was used, you should describe how you decided what sample (replicate) size (number) to use

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Our study is a post-hoc analysis of datasets previously published in Driscoll et al. 2017. Our statistical tests contrast different algorithms applied to longitudinal data from single individuals. We restrict our claims to those individuals with sufficient data for meaningful hypothesis testing. This approach, of presenting results from only a few subjects, is common in systems neuroscience, where datasets are both challenging and expensive to collect, and where there is a strong ethical interest in minimizing the number of animals used in the experiments.

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* You should report how often each experiment was performed
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The methods section summarizes relevant information about replication over subjects, replication across time within subjects, handling of outliers, and criteria for inclusion of data.

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* Statistical analysis methods should be described and justified
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* Report exact p-values wherever possible alongside the summary statistics and 95% confidence intervals. These should be reported for all key questions and not only when the p-value is less than 0.05.

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Statistical methods are described in the methods and justified in the main text. When possible, we have plotted raw data. All statistical tests are identified. In Figure 4b, we do not report individual p-values or multiple-comparison correction because p-values are indistinguishable from zero up to numerical precision, as might be expected for the scenario in which the distributions for the two populations do not overlap.

(For large datasets, or papers with a very large number of statistical tests, you may upload a single table file with tests, Ns, etc., with reference to sections in the manuscript.)

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* Indicate how samples were allocated into experimental groups (in the case of clinical studies, please specify allocation to treatment method); if randomization was used, please also state if restricted randomization was applied
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This does not apply to our study, as we do not contrast or test any effects between groups of subjects.

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Please see the ‘Data and Code Availability’ section at the end of the paper for instructions on how to access the datasets and algorithms used in this manuscript.