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PAPER OF THE MONTH • MAY 2017

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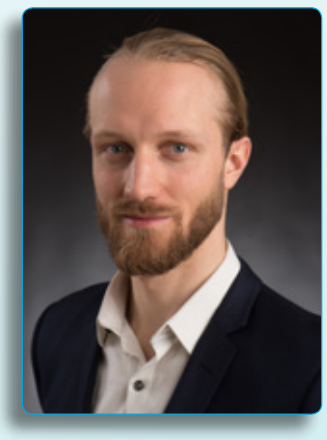

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BRAIN
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Neurofeedback or neuroplacebo?

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This paper argues that, although neurofeedback seems to work, the therapeutic benefits from it largely stem from placebo effects rather than the brain-based mechanisms that practitioners suggest. Of the thousands of papers on the subject, barely half a dozen include adequate placebo controls and implement a double-blind procedure—the gold standard for clinical research. Of those that do, the intervention and the placebo condition affect behaviour comparably. In other words, only sparse data exist to support claims of brain mechanisms in neurofeedback.

Neurofeedback is a non-invasive procedure where participants watch their brain activity in real-time. The technique promises to give patients control of a particular brain signal and, in turn, improve related symptoms. Many patients turn to neurofeedback after conventional medicine has not provided adequate relief. The procedure is also being marketed to people seeking greater concentration and to athletes looking to enhance their performance. Very little evidence, however, suggests that regulating a particular brain signal leads to the expected changes in behaviour. Dr. Raz and his doctoral student Robert Thibault contend that neurofeedback derives its benefits from placebo effects. They highlight that, even if patients receive neurofeedback from a brain other than their own, they improve in the same way as they would when they receive genuine neurofeedback.

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