

Running away from addiction: How exercise aids smoking cessation

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New research in mice sheds light on the mechanism underlining exercise's protective effect against nicotine dependence and withdrawal.

The *British Journal of Pharmacology* study reveals that exercise during

[nicotine exposure](#) markedly reduces the severity of nicotine withdrawal symptoms, an effect that is accompanied by increased activation of $\alpha 7$ nicotinic acetylcholine receptors (which are targets of nicotine) in the [hippocampal region](#) of the brain.

"The findings support the protective effect of exercise preceding smoking cessation against the development of physical dependence, which may aid smoking cessation by reducing the severity of withdrawal symptoms," said senior author Dr. Alexis Bailey, of St. George's University of London.

More information: Helen Keyworth et al, Wheel running during chronic nicotine exposure is protective against mecamylamine-precipitated withdrawal and upregulates hippocampal $\alpha 7$ nACh receptors in mice, *British Journal of Pharmacology* (2017). [DOI: 10.1111/bph.14068](#)

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