

# The effect of frequent cannabis-use on cognitive-motor performance

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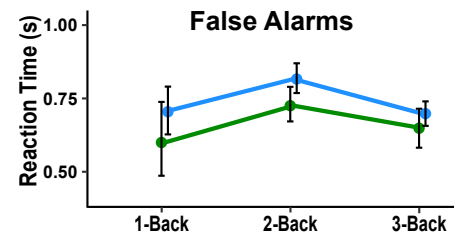
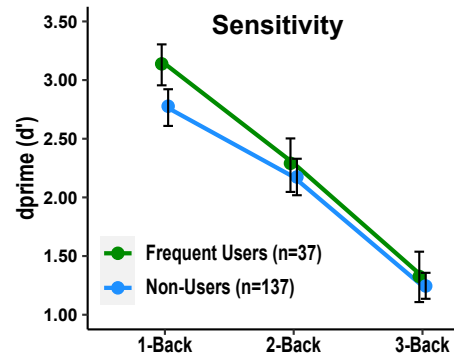
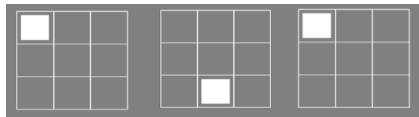
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## Does frequent cannabis-use affect cognitive-motor performance?

Online browser study. Participants (N=217;  $M_{age} = 22.2$ ,  $SD_{age} = 7.21$ ; M=51, F=166) completed a cannabis-use questionnaire and a battery of tasks assessing cognitive-motor performance.

## Spatial Working Memory

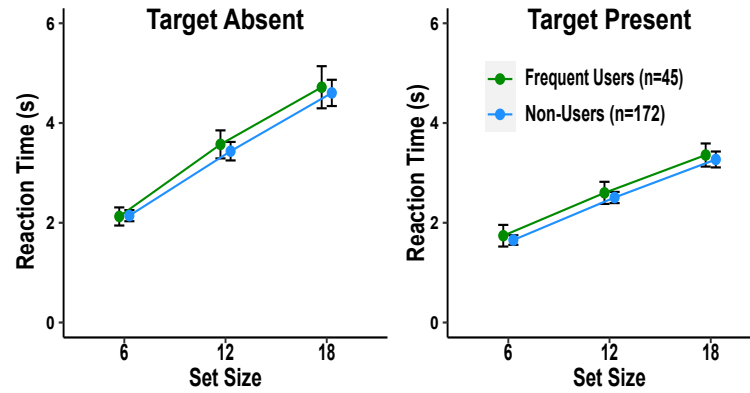
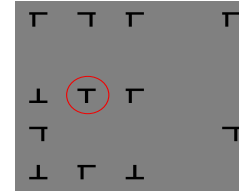
Participants observed a grid where a square appeared in one location, each trial. All participants completed three conditions: 1, 2, & 3-Back ('n' corresponds to the number of trials 'back' that had to be remembered).



Frequent users are more accurate in 1-back, and make faster errors!

## Visual Attention

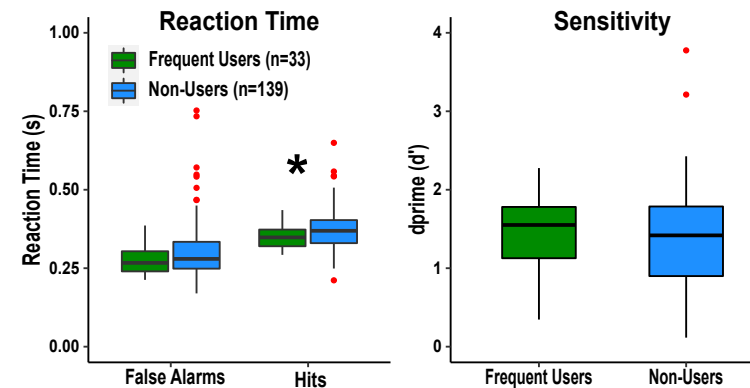
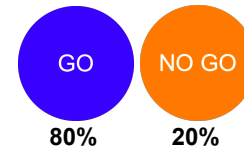
Participants searched for a target (regular, upright 'T') through sets (6, 12, or 18) of irregularly shaped 'T's. Responses were a button press of 'X' when target was present and 'M' when target was absent.



No difference between frequent users and non-users!

## Impulse Inhibition

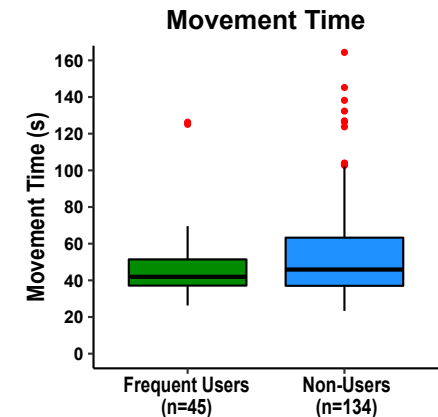
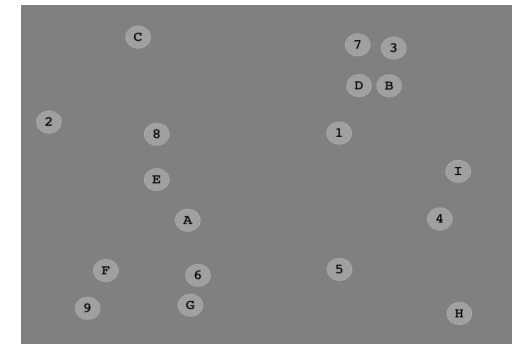
Participants made a response when presented a 'Go' stimulus, and inhibited a response when presented a 'No-Go' stimulus.



Frequent users are faster!

## Executive Function

Participants used their mouse to connect the circles, alternating between letters and numbers (e.g. 1A, 2B) as fast as possible.



Frequent users are faster!

- ▶ Frequent cannabis-use does not impair cognitive-motor function.
- ▶ Future work: immediate effects of cannabis on cognitive-motor function.