

# Study: Regular pot smokers have shrunken brains

By Melissa Healy, Los Angeles Times

Experimental mice have been telling us this for years, but pot-smoking humans didn't want to believe it could happen to them: Compared with a person who never smoked marijuana, someone who uses marijuana regularly has, on average, less gray matter in his orbital frontal cortex, a region that is a key node in the brain's reward, motivation, decision-making and addictive behaviors network.

More ambiguously, in regular pot smokers, that region is better connected than it is in non-users: the flow of signal traffic is speedier to other parts of that motivation and decision-making network, including across the superhighway of "white matter" that connects the brain's hemispheres.

The researchers who conducted the study speculate that the orbital frontal cortex's greater level of "connectedness" – which is especially pronounced in people who started smoking pot early in life – may be the brain's way of compensating for the region's under-performing gray matter.

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