

Does Cannabis (Marijuana) Use Increase Creativity? | Dr. Andrew Huberman

So let's now return to the question of whether or not cannabis and its different components increase creativity. And when you look at the literature on this, you find studies that very clearly point to a yes, it increases creativity. And it's not surprising, therefore, that cannabis can increase dopamine transmission, that is, dopamine levels in certain brain areas, in particular brain areas involved in thinking and planning. Okay, so cannabis increases dopamine in these areas, elevated dopamine increases divergent thinking, and divergent thinking is associated with creativity. And there are studies that support the idea that cannabis can increase creativity. However, there are at least as many studies that say that cannabis does not increase creativity, that cannabis increases consideration of multiple ideas, perhaps through elevation of dopamine and related systems. But that ultimately, the ideas that converge from that are not truly creative ideas, at least they don't meet the criteria for creative brainstorming and extraction of ideas that are truly novel. So it doesn't increase creativity. So which one is it? Well, fortunately, there's an entirely distinct set of literature that has taken all the other literature into consideration, and here's where we arrive. So there's a really nice study that explored creativity in cannabis users, and we will provide a link to this study. Um, first author is Emily LaFrance, and the title of the paper, uh, somewhat amusing, uh, in its own right, which is, it starts with a question, uh, inspired by Mary Jane. Of course, Mary Jane being one of the kind of old school versions of our ways of talking about cannabis or marijuana. Nowadays, people refer to it mainly as pot, as other names, too, of course. And the title of the paper is inspired by Mary Jane: Mechanisms underlying enhanced creativity in cannabis users. And I really like this study for a couple of reasons. First of all, they looked at people who did not use cannabis, as well as people who use cannabis. So they had two different groups, but they did not evaluate creativity of the cannabis users while they were under the influence of cannabis; they looked at the level of creativity in these cannabis users when they were not under the influence of cannabis and asked whether or not their ability to be creative was enhanced by cannabis. Now we're going to compare this to studies in which people come into the laboratory and actually use cannabis, and then they evaluate creativity under that context. But this study has some unique takeaways that I think are really interesting. First of all, they did, yes.

see evidence for enhanced creativity And when I say enhanced creativity I mean within the context of this divergent thinking thing that I talked about a moment ago and when I say enhanced I mean significantly greater than in non users So people that don't use cannabis So right now I can imagine that all the cannabis users are are are cheering Yes cannabis increases creativity makes people more creative than they would be otherwise Well this is interesting we have to ask ourselves how that was accomplished and it turns out that one of the major ways in which it was accomplished is that cannabis users even if they are not under the influence of cannabis are far more open to novel ideas And they have a more explorative and sort of reduced anxiety or I should say lower anxiety mode of thinking when they explore novel ideas which is essential for divergent thinking So they observe both enhanced divergent and convergent creative type thinking in cannabis users and the source of that they conclude is and here I'll just quote cannabis users higher levels of openness to experience are responsible for their enhanced self reported creativity and convergent thinking test performance So it's not necessarily that cannabis is increasing the capacity of the brain areas that are associated with creativity but rather cannabis appears to be increasing in openness and probably doing that in part through lowering anxiety in particular people And that openness is leading to inclusion of more ideas during the divergent thinking process right They're willing to consider throwing up more things on the wall to see if they stick so to speak So in their conclusions they have a really nice statement Again I'll just read uh from the paper because they said it better than I ever could quote While mainstream media has propagated the idea that cannabis expands the mind and it enhances creativity Our results show the link between cannabis and creativity is largely a spurious correlation meaning that it's not the case that cannabis increases creativity but and I I inserted the the but in this quote but driven by differences in personality that are related to cannabis use for example openness to experience that are related to both cannabis use and augmented creativity This is a real chicken egg argument What do I mean by that What I mean is this paper finds that people who are more open to experience are more likely to use cannabis and people who use cannabis are going to be more open to new experiences And that combination of features openness to experience and what that openness to new experiences brings enhances the convergent and divergent thinking that is characteristic of the creative process So in short cannabis increases creativity but through changes in personality that tap into the creative process rather than directly

impacting the neural circuits that for instance turn on creativity And I have to say this study is really important because by exploring cannabis users not while under the influence of cannabis they were able to tap into this very important what I believe to be fact because if you think about a study in which you would have one group using cannabis and another group not using cannabis and then you give them some task that taps into creativity you will see effects and very likely you'll see effects where cannabis might even increase divergent convergent thinking and creativity that those results have actually been published many times before But given the varied effects of cannabis and THC that we talked about earlier through all that complex signaling stuff you can imagine that there will also be other studies and in fact there are where divergent and convergent thinking and creativity is not assisted by cannabis and might even be reduced by ingesting cannabis However if one considers that divergent thinking is absolutely crucial to the creativity process and the range of things that one will explore will be enhanced by openness and by reduced levels of anxiety So a willingness to explore different options some of which might seem completely crazy and cannabis increases the openness and the re reduces the anxiety that create that sense of openness Well then it makes perfect sense why cannabis would increase creativity in certain individuals but not directly And this study the one I just referred to which I should say was published in the journal Consciousness and Cognition And again we'll provide a link to it Did a wonderful job of teasing out this impact of cannabis on personality which then impacts creativity So if somebody asks you or if you're wondering or if you feel like cannabis increases creativity in some sense the answer is yes but the answer is yes Because of the ways that it shapes openness to new ideas and can I should say can because not in everybody but can in some individuals reduce anxiety What this means is that if you are somebody who experiences anxiety or increased levels of focus from cannabis regardless of the strain And here I have to imagine people are exploring different strains if they're exploring them at all exploring different modes of delivery smoking or ingestible et cetera If you're somebody who experiences anxiety it's very likely that you won't have the increased openness to experience and divergent ideas that will facilitate creativity However if you are somebody who achieves heightened levels of relaxation and reduce levels of anxiety from cannabis regardless of which strain we happen to be talking about well then yes it will position you to be in a heightened state of creativity at least as defined by convergent and divergent thinking