



Working to Reform Marijuana Laws

Cannabis, Mental Health and Context:

The Case For Regulation

By Paul Armentano
Senior Policy Analyst
NORML | NORML Foundation
E-mail: paul@norml.org
Updated May 2, 2007

Recent warning published in the United Kingdom and in America this week suggesting that cannabis' primary psychoactive compound THC may trigger mental illness, including psychosis and schizophrenia, warrant a serious reply.

According to news from the *Associated Press* and others, investigators at London's Kings College reported that the administration of doses of synthetic THC temporarily interfered with activity in the inferior frontal cortex, a region of the brain associated with paranoia, while administration of the non-psychoactive compound cannabidiol ([CBD](#)) stimulated relaxation. The reports go on to suggest that chronic use of cannabis may precipitate various types of mental illness and cite a separate unpublished study indicating that cannabis use may exacerbate symptoms of schizophrenia.

Such clinical findings and suggestions are not new. Scientists have known for decades that THC is psychoactive and that peak blood levels of its primary active metabolite 11-OH-THC are occasionally associated with temporary feelings of dysphoria, paranoia, and even panic attacks. (These events, when documented, typically occur in cannabis naïve users.)

Conversely, scientists have also been long aware of CBD's anxiolytic and anti-psychotic effects. In fact, many experts speculate that it is the lack of CBD in [Marinol](#) (the synthetic THC oral prescription pill) that is responsible for the drug's [enhanced psychoactivity](#). By contrast, CBD occurs naturally in whole-plant cannabis, and is believed to modify and/or diminish some of the psychoactivity associated with THC when cannabis is inhaled.

Fears that chronic cannabis use may be positively associated with various mental illnesses, particularly schizophrenia, are also long-standing. However, a recent meta-analysis investigating the use of cannabis use and its impact on mental health reported that those who use cannabis in moderation, even long-term "will not suffer any lasting physical or mental harm. ... Overall, by comparison with other drugs used mainly for 'recreational' purposes, cannabis could be rated to be a relatively safe drug." [1](#)

Cannabis In Context

The phrase "relatively safe" is appropriate in any discussion regarding cannabis and mental health. No substance is harmless and in many cases, the relative dangers of a drug may be increased or decreased depending on set and setting. Cannabis is no different.

There is limited data suggesting an association, albeit a minor one, [2-3](#) between chronic cannabis (primarily among adolescents and/or those predisposed to mental illness) and increased symptoms of depression, psychotic symptoms, and/or schizophrenia. [4-6](#) However, interpretation of this data

is troublesome and, to date, this observation association is not well understood. [7-9](#) Identified as well as unidentified confounding factors (such as poverty, family history, polydrug use, etc.) make it difficult, if not impossible, for researchers to adequately determine whether any cause-and-effect relationship exists between cannabis use and mental illness. Also, many experts point out that this association may be due to patients' self-medicating with cannabis, [10](#) as survey data and anecdotal reports of individuals finding therapeutic relief from both clinical depression and schizotypal behavior are common within medical lore, and clinical testing on the use of cannabinoids to treat certain symptoms of mental illness has been recommended. [11](#)

Most recently, a large-scale study by investigators at London's Institute of Psychiatry reported that those patients diagnosed with schizophrenia who had previously used cannabis did not demonstrate exacerbated symptoms of the illness compared to age-adjusted controls who had not used cannabis. "This [finding] argues against a distinct schizophrenia-like psychosis caused by cannabis," they concluded. [12](#)

Investigators in the study did not address whether cannabis consumers had greater odds of contracting schizophrenia when compared to otherwise matched controls who did not have a history of cannabis use. However, a 2006 review by Britain's Advisory Council on the Misuse of Drugs (ACMD) previously concluded, "For individuals, the current evidence suggests, at worst, that using cannabis increases lifetime risk of developing schizophrenia by one percent." [13](#)

Nevertheless, until this association is better understood, there may be some merit to various government warnings that adolescents (particularly pre and early teens) and/or adults with pre-existing symptoms of mental illness refrain from using cannabis (and/or other psychoactive substances), particularly in large quantities. This statement, however, is hardly an indictment of cannabis' relative safety when used in moderation by adults or an endorsement of the federal government's efforts to criminally prohibit its use for all Americans. If anything, just the opposite is true.

Health Risks Call For Regulation, Not Prohibition

Health risks connected with drug use -- when scientifically documented -- should not be seen as legitimate reasons for criminal prohibition, but instead, as reasons for legal regulation. Specific to cannabis, if studies demonstrate that those "who first used marijuana before age 12 [are] twice as likely as adults who first used marijuana at age 18 or older to be classified as having serious mental illness," [14](#) then this is an argument in favor of legally regulating cannabis in a manner similar to alcohol, so that better safeguards may be enacted restricting adolescents from legal access to it. [15](#) These concerns, however, do not support criminally prohibiting the responsible use of the cannabis by adults any more than fears regarding the abuse of alcohol by a minority of teenagers support a blanket prohibition on the use of beer by adults.

In addition, if as some suggest, "as many as one in four people may have a genetic profile that makes marijuana five times more likely to trigger psychotic disorders," [16](#) this claim is yet another argument in favor of regulation. If there does exist a minority population of citizens who may be genetically prone to potential harms from cannabis (such as, possibly, those predisposed to schizophrenia), then a regulated system would best identify and educate this sub-population to pot's potential risks so that they may refrain from its use, if they so choose.

To draw a real world comparison, millions of Americans safely use ibuprofen as an effective pain reliever. However, among a minority of the population who suffer from liver and kidney problems, ibuprofen presents a legitimate and substantial health risk. However, this fact no more calls for the criminalization of ibuprofen among adults than do these latest allegations, even if true, call for the current prohibition of cannabis.

Finally, there lies the fact that cannabis prohibition has forever undermined the federal government's ability to educate its citizens, particularly young people, to the potential risks of marijuana when and where they present themselves. Ending prohibition and enacting a legal, regulated cannabis market would likely restore this lost credibility, as evidenced by the fact that science-based, federal education campaigns regarding the health risks of tobacco and drunk driving have greatly reduced smoking and driving under the influence among teenagers. Conversely, similar rhetorically-based campaigns regarding teen pot use have fostered increased levels of illicit drug use among their target audience. [17-18](#)

As concluded by the Netherlands Drug Policy Foundation, cannabis' "health risks are remarkably limited, but cannabis is not completely harmless." As a result, the Foundation determined: "There ought to be a special legal regulatory system for cannabis because its use definitely does entail health risks. If cannabis was completely harmless, the same rules could be applied as to tea. Cannabis should not be made freely available, but the rules on cannabis can be very general and lenient." Placed in this context, the administration's latest anti-pot campaign does little to advance the government's position in favor of tightening prohibition, and provides ample ammunition to wage for its repeal.

Endnotes

- [1](#) Leslie Iverson. 2005. [Long-term effects of exposure to cannabis](#). *Current Opinion in Pharmacology* 5: 69-72.
- [2](#) The Beckley Foundation. 2006. [Cannabis and Mental Health: Responses to Emerging Evidence](#).
- [3](#) *London Telegraph*. "Cannabis use will impair but not damage mental health." January 23, 2006.
- [4](#) Fergusson et al. 2006. Cannabis and psychosis. *British Medical Journal* 332: 172-175.
- [5](#) Wayne Hall. 2006. [The mental health risks of adolescent cannabis use](#). *PLOS Medicine* 3 (open access journal).
- [6](#) Semple et al. 2005. Cannabis as a risk factor for psychosis: systematic review. *Journal of Psychopharmacology* 19: 187-194.
- [7](#) Malik and D'Souza. 2006. [The association between cannabis and psychosis](#). *Psychiatric Times*. 4 (open access journal).
- [8](#) Harder et al. 2006. Marijuana use and depression among adults: testing for causal association. *Addiction* 10: 1463-1472.
- [9](#) Weiser and Noy. 2005. Interpreting the association between cannabis use and increased risk of schizophrenia. *Dialogues in Clinical Neuroscience* 1: 81-85.
- [10](#) Ferdinand et al. 2005. [Cannabis use predicts future psychotic symptoms, and vice versa](#). *Addiction* 100: 612-618.
- [11](#) Ashton et al. 2005. [Cannabinoids in bipolar affective disorder: a review and discussion of their therapeutic potential](#). *Journal of Psychopharmacology* 19: 293-300.
- [12](#) Boydell et al. 2007. A comparison of symptoms and family history in schizophrenia with and without prior cannabis use: Implications for the concept of cannabis psychosis. *Schizophrenia Research* [E-pub ahead of print; Abstract online April 31, 2007].
- [13](#) *London Telegraph*. op. cit.

NORML

Working to Reform Marijuana Laws

[14](#) Office of National Drug Control Policy Press Release. "[White House Drug Czar, Research and Mental Health Communities Warn Parents That Marijuana Use Can Lead to Depression, Suicidal Thoughts and Schizophrenia.](#)" May 3, 2005.

[15](#) According to national data compiled by the University of Michigan, 86 percent of 12th graders say that marijuana is "fairly easy" or "very easy to get." Some surveys note that teens respond that marijuana is now easier to obtain than alcohol; See: *Associated Press*. "Teens Say Buying Dope Is Easy." August 19, 2002.

[16](#) Office of National Drug Control Policy Press Release. op. cit.

[17](#) Czyzewska and Ginsburg. 2006. Explicit and implicit effects of anti-marijuana and anti-tobacco TV advertising. *Addictive Behaviors* [E-pub ahead of print; Abstract online May 1, 2006].

[18](#) Westat et al. 2006. [Evaluation of the National Youth Anti-Drug Media Campaign](#). Washington, DC: National Institute of Drug Abuse (NIDA).