

Science AMA Series: I'm Dr. Kevin Hill, an addiction psychiatrist at McLean Hospital in Boston, Massachusetts. I currently research marijuana and have spoken to many law-makers regarding the legislatio

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# Science AMA Series: I'm Dr. Kevin Hill, an addiction psychiatrist at McLean Hospital in Boston, Massachusetts. I currently research marijuana and have spoken to many law-makers regarding the legislatio

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I've been in a family riddled with addiction problems, anxiety and depression. I myself have managed to escape the same effects of addiction such as job issues, money problems and/or legal issues have had on my less fortunate family members. However I am a daily user of Cannabis only while my family uses Alcohol, Cigarettes, and various forms of opiates. My mother does not use any illicit drugs, never uses opiates recreationally and only drinks on occasion. Except that she takes several prescribed psychoactive medications for anxiety and depression on a daily basis. I've also been told that she can't suddenly stop taking these medications because of the increased risks of suicidal thoughts, increased anxiety and possible exacerbation of further underlying symptoms. I have also heard her talk of her medication as if she "wouldn't know what to do with herself" without them. When i've asked her why she takes these medicines, she responded simply because they make her feel better, less irritable, less anxious and happier overall. She says the negative effects of these medications outweigh the benefit she is experiencing.

I am seeing almost the same exact statements being directed towards Cannabis use in regards to exacerbating anxiety and depression when used frequently and also when abstained suddenly. I have noticed online that many users of Cannabis also claim it is medication to help them feel better for some of the same reasons as stated above. These two situations seem to have some similarities and they raise some interesting questions.

**In your opinion, how does one determine which is an addiction and which is daily medication?**

**Do you consider the two behaviors different in any way?**

**What is your perspective regarding the differences between addiction and self-medication?**

[helpfiles](#)

Thanks for logging onto the AMA. It sounds like you and your family, like many of us, have been battling some difficult problems.

I like the simple definition of addiction: "Repeated use despite harm." Sometimes, though, it is hard for us to determine if our behavior is harmful. If there is a question, then I would encourage an evaluation by a mental health professional.

Use of marijuana can be an addiction, but it could also be medication-- it depends on what you are treating. The reasons for use need to be explored.

Self-medication is a theory that a well-known Boston psychiatrist, Dr. Ed Khantzian, has written about. It is a useful way to think about why someone may use a particular substance. One can have a good reason to use a substance, though, and still develop an addiction.

Hi, and thanks for answering our questions!

My wife is in med school, planning to specialize in addiction psychiatry, and I am a frequent marijuana user, so this feels like a wonderful opportunity.

**I wonder what your opinion is regarding marijuana and addiction in general -- whether it deserves attention the same way as cigarette or alcohol addiction?**

Personally, I don't feel addicted... but I do like it a lot. I don't feel a need or reliance. However, I was able to quit smoking (cigarettes) cold turkey after a few years of that habit, and wonder if some people are more resistant to addiction and if that's skewing my opinion of marijuana. The fact that it's helped to keep me away from both cigarettes and drinking feels like a win in the general health sense, and I'm curious about your opinion on that too. **Is it "better" or just different?**

**Finally, what do you think are some of the bigger hurdles to legislation? Will competition start up the ol' Reefer Madness machine, or something similar?**

Thanks again for being here!

[Semantiks](#)

Here is a link-- scroll to the middle of the page-- to a video in which I describe addiction:

<http://robbreport.com/health-and-wellness/prevention-treatment/new-mclean-borden-cottage-offers-hope-recovery-addiction>

"Repeated use despite harm." So yes, there are some people who are addicted to marijuana. Most are not, however. Marijuana addiction deserves attention, for sure.

Is marijuana addiction "better" than nicotine or alcohol addiction? Depends on the severity of the addiction.

Hurdles to legalization? The biggest is probably a lack of education in part due to the fact that both sides of the debate present biased information. We need to move beyond whether a person is in favor or not to what policies should look like in the event that voters want legalization (in Massachusetts, for example).

I'd like to think that Reefer Madness would be a thing of the past, but some groups are still using scare tactics.

Cannabis seems to be the most widely-used illegal drug in the US. What do we know about how usage rates have changed in states with legalization, in terms of frequency and amount consumed?

[adoarns](#)

This is a critical question where the data may be surprising. Those opposed to legalization worry that increased access will mean increased use and, in turn, increased addiction. It is early, but so far this has not been true (feel free to post links if you disagree). Colorado has not seen an significant rate of increased use since legalizing for example.

This is a perk of having WA and CO act as trailblazers in this regard.

Also, if you think legalization will mean more use and addiction, then you probably thought that medical marijuana would, too. Not the case according to an important study by Hasin et al. in Lancet Psychiatry last year. States with medical marijuana did not have increased rates of use relative to non-medical marijuana states.

Hi there, I'm under the impression that marijuana use, in terms of psychological impact is largely benign, however, I don't feel very informed on this issue. So my question is, what are the long term adverse psychological affects of daily marijuana use over long periods of time (in adults)? Thanks for doing this.

[seanacle](#)

First and foremost, DOSE MATTERS. The amount you use over what period of time will play a large role in determining effects.

Heavier use (4x a week or more) has been associated (note, I am not saying causes) with worsening anxiety and worsening depression. Heavy use is also associated with cognitive difficulties and more impulsivity. The IQ decline seen in the Meier (2012) study has been disputed, but I think the study has merit overall (although we need more research). The National Institute on Drug Abuse is interested in these questions and they are funding important studies to answer them.

Unfortunately, though, NIDA alone can't fund all of the necessary research and investigators like me are always looking for funding.

Heavy marijuana use can also make it more likely for those with a family history of psychotic disorders to express a psychotic disorder (5X more likely according to Di Forti et al. 2015, Lancet Psychiatry)

Fellow Bostonian! I just applied to be in a study at your lab!

Question: what makes a state more likely to legalize? I know Alaska was a libertarian movement, but what makes Colorado and Washington special? I understand they're liberal places, but a lot of states are too.

Thanks for your time!

[gingerbreadfuck](#)

Thanks for asking to participate in our studies! We've gotten lots of emails today thanks to this AMA! Check out <http://drkevinhill.com/research/> if you are in the Boston area and interested.

Liberal states are certainly more likely to legalize. State legislatures reflect the composition of the state, so the voters and lawmakers in liberal states often are in favor of marijuana reform. As with any political movement, voters need to make their voices heard for politicians to act.

In a legalized regime, how should employers approach the prospect of employees who are legal users of cannabis?

[adoarns](#)

Thanks for the question. Depends on the job. Cannabis use may affect ability to drive or operate heavy machinery, for example. Similarly, cannabis use might not affect performance in other jobs. For instance, I don't think an occasional user should be disqualified from a IT position.

What is the risk of developing a Marijuana addiction? Are those using for medical reasons at higher risk than recreational users?

What do you consider the most damaging effects of Marijuana abuse? (besides getting in trouble with the law)

What kind of programs are there for the treatment of Marijuana addiction? Is total abstinence always

the solution? Or can you teach patients to go back to consume it in moderation?

[virkon](#)

Keep firing away! Wow, rapid fire.

About 9% of adult users develop addiction (Anthony et al. 1994; Lopez-Quintero et al. 2012). About 16% of adolescent users develop addiction. Of course, most who use don't become addicted.

I am not aware of research comparing addiction rates for medical vs. recreational.

It is sad when marijuana use triggers a psychotic break in young people. We are left to wonder if such a break would have occurred without cannabis.

Most treatment for marijuana addiction is behavioral (talk therapy). Our work focuses on medications and top researchers like Dr. Kevin Gray and Dr. Frances Levin are also looking at medications for marijuana addiction.

Total abstinence is a great goal, but one can significantly reduce marijuana use and see tremendous clinical benefit. I have worked with many patients who used 4x a day, everyday, for years and were able to cut down to a couple times a week. They feel pretty good about that type of result and I do, too.

What are your thoughts on marijuana continuing to be a Schedule I drug?

The DEA is ostensibly saying that marijuana currently has no medical value whatsoever... how can they possibly keep that farce up with all the incredible work that has been done in the healthcare field with various forms of cannabis?

[harborwolf](#)

I don't think marijuana should be Schedule I. Schedule I means 1) addictive potential (marijuana does) and 2) no medical value (not true in my view). I described the evidence for marijuana in an article I published in JAMA: <http://cannabisclinicians.org/wp-content/uploads/2015/07/JAMA-Chronic-Pain-2015.pdf>.

Keep in mind that the 2 FDA-approved cannabinoids (dronabinol and nabilone) are Schedules III and II, respectively.

Cocaine is Schedule III!

Is there even a small hope for drug addiction to become commonly viewed as the symptom of greater issues rather than the underlying cause?

[LimberWaffle](#)

Yes, I think so.

I can't emphasize enough that it is essential to sit with a patient and take a careful history to try to piece together all of the factors that play a role in someone's situation. Many times addiction is not the primary issue.

When someone comes in to see me for help, I need to consider everything that is going on in order to figure out how to help them. If I zero in on the addiction issue alone, chances are I will miss other key issues and the patient won't do well.

As a psych nurse I often wonder the effectiveness of Medical Marijuana on anxiety, especially on my elderly patients. I live in a state where the MM was recently voted against. How effective is MM on psychiatric disorders like generalized anxiety?

[AnonymousSuperRN](#)

Great question. Studies have shown that cannabis can exacerbate anxiety overall, despite the fact that it can alleviate anxiety in the short-term. I don't think medical marijuana is helpful for psychiatric conditions. It is helpful for other conditions-- I am sure we will discuss.

Doctors set moderation limits for alcohol, are there any other similar limits you would suggest for marijuana?

[randomburner23](#)

Hard to set a limit. Just like alcohol, no concrete limit fits everyone. We tend to think of problematic use as being 4x a week or more-- this is a general guide. There could be instances where 4x a week or more may not be a problem, but it would be a red flag for a clinician like me.

What do you see as the biggest challenge to legalization of recreational marijuana, from the medical/psychiatric standpoint?

[lady\\_epperly](#)

Lack of compromise leading to poorly-designed policies.

We should be looking at this issue from an evidence-based perspective and crafting policies that give people what they want while limiting risk.

Sadly, we are not doing this for the most part. The pro- and anti- people do not compromise, they dig in their heels and roll the dice. The results have been policies that could be much, much stronger.

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[redditWinnower](#)

Thanks for archiving; hopefully we will make it worth referring to in the future.

What's the most common reason for opposition to the legalization of Marijuana that you hear from lawmakers?

[blueyfoeey](#)

As mentioned above, lawmakers are concerned that legalization will mean increased use and increased addiction, especially in young people. We don't have a definitive answer yet on that, but that does not seem to be the case so far.

When it comes to Marijuana a lot of people concern about the thc because of it's psychoactivity. Do any of the other cannabanoids in have unique properties or benefits/downfalls?

Also does Marijuana truly stimulate creativity and deep thinking (think the stoner philosopher trope) on a chemical level? Or is it all placebo there?

[Gamerdoe](#)

The reply from citrus\_mystic is spot on.

As a society, we have focused mostly on THC and CBD. CBD is especially promising. It is not psychoactive and it appears to have anti-anxiety and anti-psychotic properties. It also has shown potential as a treatment for epilepsy-- a top pharmaceutical company has it in Phase II trials.

Many people say that they feel more creative while using marijuana based in part upon the feelings of relaxation and euphoria they experience. Doesn't seem to be a placebo effect.

Dr. Kevin, Thanks for the ama, again! Last time you were here, partially in regards to the previous research you had done, I posted the same questions below here:

[https://www.reddit.com/r/science/comments/3ouhvw/science\\_ama\\_series\\_im\\_dr\\_kevin\\_hill\\_an\\_addiction/cw0kljo](https://www.reddit.com/r/science/comments/3ouhvw/science_ama_series_im_dr_kevin_hill_an_addiction/cw0kljo)

Thanks for the ama!

Several questions:

1. You mention marijuana addiction, but there's usually the argument of whether it's physically addicting or mentally addicting. Is there room to make arguments for both sides?
2. Depending on your above answer, and as far as my knowledge goes, would you agree that there is such a thing as marijuana withdrawal? If so, is it acting in the traditional withdrawal sense of other 'drugs'?
3. Has there been any more research lately that provides new or different results about long term use and what functions it may affect?
4. You mention working with a new chemical that mimics thc, but in what sense? It's my understanding that the particular shape of THC allows our brains to absorb it, are you saying we have now identified another similar compound not found naturally? Furthermore, do you think the future might hold something for CBD as well?
5. What is the necessity for the aforementioned synthetics? As competition? Market flooding? Stigma erasing?
6. Super weird and random question, what do you think would happen if you have someone receive an IV of pure THC over an extended period of time? As there is no overdose limit, has such extended exposure ever been hypothesized, if not what do you think would happen and can you see a future where a treatment like this may be viable for pain and inflammation management if there's no other long term side effects?

Thanks in advance, your career choice is awesome to me. :)

[DoNotJudgeBasedOnAge](#)

For more detail, check out my book or even my twitter @drkevinhill.

1. Cannabis is physically and psychologically addictive. Although most don't become addicted.
2. There definitely is cannabis withdrawal (marked by anxiety, irritability, and difficulty sleeping) after abrupt stoppage of heavy use. Our studies are developing medications to combat this withdrawal.
3. Discussed above.
4. The meds we use will occupy the cannabinoid receptors to limit withdrawal symptoms. I am very excited about CBD-- please follow our work and you will see.
5. We use the FDA-approved cannabinoids largely for safety reasons. We know exactly what we are using-- dose, consistency, etc.
6. That is a random question-- no idea.

What concerns you about legalization in MA specifically?

[nowaste](#)

Lots. Here is a link: <http://media.wrko.com/a/113448451/kevin-hill-harvard-marijuana-2-22-16.htm>.

The current ballot initiative is weak, specifically in the areas of taxation and oversight. The proposed effective tax rate is 12%-- the 4 states and DC tax at 27-44%. That means 12% will leave a lot of money that could be used for education and treatment will be lost. Who will be on the "Cannabis Control Commission?"

Also, the politicians in the Commonwealth have been spectators on this issue to this point, and I fear that it will not change.

If medical marijuana was the mid-term exam, Massachusetts failed the mid-term. If legalization is the final exam, we have lots of work to do to pass the final.

Is marijuana actually able to help with addiction to other substances? Either by easing withdrawal symptoms, or by offering a less destructive alternative? I've heard many anecdotal reports of the former, and personally I found it to help with stopping opiates and alcohol. However most addiction and mental health therapists are deeply against it, arguing for abstinence or legal psychopharmacology. Is there a place for cannabis in addiction medicine? Even if as a "better of two evils"?

[scabette](#)

I don't think of cannabis as an "exit strategy" from addiction to other substances. Perhaps we'll see studies in the future, but all evidence at this point is anecdotal.

Importantly, we are talking about addiction, not the use of other substances as medication. If a patient is using opioids to treat pain, cannabis could very well be a better option. If a patient is addicted to opioids, then I would recommend an evaluation to see whether medication-assisted treatment (MAT) with buprenorphine, methadone, or naltrexone makes sense. MAT works-- there are many studies to support this (Weiss et al. 2011 Archives of Gen Psychiatry, for example).

Good morning Dr. Hill!

MM is legal here in AZ. Last year it was voted as a viable treatment for PTSD. I won't delve too far into my past, but I am service-connected for rather severe PTSD. I have been hesitant to go get my "green card" because of the stigma attached. It is very difficult to get past the stereotypes for me, even though I believe there would be a benefit.

Can you please share some of your thoughts on the benefits for PTSD patients? I have done some research, but hearing from someone with your background and expertise would really help to possibly push me to get beyond those stigmas.

I do receive counseling, other meds, etc. I don't necessarily want a tailored plan, just your thoughts on how cannabis might possibly help myself and others with this daily struggle. Thank you in advance for taking your time to do this.

[Brilledit](#)

Thanks for your service to our great country.

I am not bullish on cannabis for PTSD. A recent study by Wilkinson et al. from Yale showed cannabis worsens PTSD.

I think CBD may be useful for PTSD though and would like to see studies done. Maybe high CBD strains of marijuana could be better than high THC for PTSD.

This question is not related to marijuana but just addiction in general. Is it true that no matter what kind of things you are addicted to, the mechanism in the brain that causes addiction is the same? How to break free from addiction to the internet, something I consider a drug?

[ASilverStorm](#)

There are common pathways involved in the addiction to various drugs and behaviors. Amphetamines, ice cream cones wrapped in donuts, and cannabis all cause surges in brain chemical called dopamine.

Internet addiction is a real problem. If someone with resources would post, that would be great. We will look into it as well.

Hello Dr. Kevin Hill. Thank you for the AMA.

How can it be that people in high intellectual jobs, such as professors, lawyers, doctors, physicists etc. can have a functioning alcohol addiction etc. (which we read a lot of examples about) but never hear about similar intellectuals having a functioning marijuana addiction. Seeing that the two substances achieve a similar, relaxed, state. Within same question, do you meet high intellectuals with a functioning marijuana addiction, but kept secretly because of law or other ethical problems?

Thanks,

edit for clarity

[LidarAccuracy](#)

Again, most marijuana users are not addicted and even half of daily users are not addicted.

These high-functioning individuals using marijuana daily don't come to me unless there is a problem (employer tells them to see me, spouse ultimatum, etc.).

Hi and thank you for doing this AMA! Recently, I've heard much about so called synthetic marijuana. What is the major difference between synthetic and natural marijuana? Is it any safer or more harmful than natural? I've heard of cases of bad reactions to synthetic, (see [Chandler Jones of the NE Patriots](#)). Is that really due to the synthetic marijuana or something else it is laced with?

[hutch2522](#)

First question on synthetics! I have been waiting...

Regular marijuana has both THC and CBD. CBD acts to buffer the harmful effects of THC. Synthetic cannabinoids only contain chemicals similar to THC-- with no CBD buffer. So the user is more likely to experience harmful side effects.

Also, you don't know exactly what chemical is in a packet and what the dose is. The manufacturers spray chemicals onto dried plant matter. This causes "hot spots" or areas of higher concentration.

Very dangerous overall!

A NZ study spanning over a decade found marijuana to cause cognitive deficits in teenagers under the age of 25 - including a reported IQ loss. Is this deficit recoverable after usage stoppage?

How common is it to find chemicals other than weed in marijuana sold illegally?

[depressed333](#)

The Meier study (2012) is controversial. I think it's core message-- that heavy marijuana use in young people whose brains are developing is problematic cognitively-- is valid. According to that study, the deficit was not recoverable after stopping.

I am not aware of studies on the rate of adulterants in black market marijuana, but it is not something my patients describe often.

Are there any known/upcoming studies to see how marijuana interacts with antidepressant drugs?  
Thank You! :)

[evillittlekiwi](#)

Not that I am aware of. Reddit users, please post if you know of any. Generally, cannabis has few drug-drug interactions.

Hi Dr. Hill, I was just thinking about the different strains and strengths of Marijuana. Is there a correlation between people using high strength skunk and developing psychological abnormalities compared to people who smoke hash or lower grade green?

Also if marijuana was to be legalised, would there be limits in place on the strength of it?

Thank you

[laughingtreenknight](#)

Yes! DOSE MATTERS (one of the unforeseen take-home points for today's AMA).

The DiForti paper (Lancet Psychiatry 2015) I mentioned above shows this correlation-- higher THC, more likely to develop psychosis.

As for potency limits, I doubt they would be implemented.

Where do you see the legislation moving for healthcare providers? I know substance use is typically frowned upon, but alcohol and tobacco are still 100% legal to use as long as it doesn't interfere with your work.

[Shrodingers\\_Dog](#)

Legalization would result in a change to some of the licensure questions that are posed to healthcare providers, but overall, not much would change. Drug tests for healthcare providers are rare.

Dr.Hill thank you so much for taking the time to do this AMA! I am a person that considers himself generally familiar with drugs (not using, just reading about them). I have read millions of posts about the benefits from Marijuana usage and I am strongly PRO legalisation. However, I have NO idea how it affects our lungs compared to cigarettes - is it something that we will be campaigning against in 50 years saying that it is bad for your physical health (higher chance of cancer for example) ?

[archidoge](#)

Depends on how you use cannabis, but smoking is never beneficial for your lungs, obviously. There are no studies linking cannabis use with cancer, though.

Do you find that legislators are typically receptive and understanding of the research and science behind marijuana being used recreationally?

[PainMatrix](#)

They are usually willing to listen. Are they willing to act? That is a better question. Many politicians don't want to touch this issue.

We are making progress, though. Making pro-marijuana statements years ago may have been politically harming, but at least now some politicians are willing to talk about it.

Concentrates have become increasingly popular, is there any research to show if they are any more addictive than buds?

Although this one is probably more political than science-y, do you think big tobacco will play a large role in the legalization? If so, do you think they would add additives and/or nicotine into their products?

[crustyorifice](#)

Great question-- not sure if concentrates are more addictive. They are more likely to cause side effects though. (Remember from above: DOSE MATTERS).

Big tobacco might play a role, and I think people have a right to be concerned. This is why, though, the policies are so important. I think you can write smart policies that can limit the influence of tobacco or alcohol companies.

Policies may also play a role in composition of products. The public would certainly be outraged if they added nicotine or other chemicals. Again, this is why policy should address this now. E-cigarettes are an example where regulation has been playing catch-up.

We can't afford to have that happen with cannabis.

Thanks for doing this, Dr. Hill! I'm right below you in Rhode Island, where MM users must pay \$100 for a 2 year license to be a MM patient.

I know of no other drug where one has to pay to be licensed to be able to get one's prescription. Are you familiar with any similar programs for MM or any other prescribed medicine, and do you have any opinions on this type of licensing program?

Thanks again for your time.

[12stringPlayer](#)

The \$\$ for a license supports the infrastructure needed for a medical marijuana program. This is necessary because medical marijuana is not regulated by the FDA. The more that medical marijuana is treated like other medications, the safer it will be. That means having your physician recommend, not a medical marijuana specialty clinic, having appropriate follow-up visits, etc.

Thank you for doing this AMA. While medical marijuana is a hot topic in the U.S. right now, have you found in your research other drugs that may be misunderstood by the public?

[caazin](#)

Not to the degree that marijuana is misunderstood. But we need better education on ALL drugs.

In your view, is the relationship between cannabis and psychosis due to causation or correlation? Aside from genetic testing, how might one go about assessing whether s/he has a vulnerability to schizophrenia? Is schizophrenia the only disorder linked to cannabis induced psychosis? Ought one seek professional help if s/he has experienced cannabis induced psychosis (multiple occasions; did

not last longer than intoxication) with no other symptoms of schizophrenia?

What is your position on cannabis as treatment for chronic migraine? Is the evidence of its effectiveness qualitatively different than evidence for chronic pain?

MM while breastfeeding? It is understood that THC passes through the breastmilk: the real question is whether this is necessarily a bad thing?

[Fuckthatkitkat](#)

1) Addressed the increased risk for psychosis above. Correlation, not causation at this point. 2) Aside from genetic testing, family history is probably the best we can do. 3) I am not aware of evidence for cannabis as a treatment for migraines. There are many medications that are effective, though. 4) I would not recommend MMJ while breastfeeding. Research shows marijuana exposure in utero affects brain development (Wang 2004), so I would have concern.

Regarding " concerns about some of the ballots currently proposed" what are examples of good proposals and concerning ones?

[eddie1975](#)

Eddie, see above. CO and WA have done lots of things very well, especially under trying circumstances. In some cases, such as with taxation in Massachusetts, it does not appear that states considering legalization have paid close enough attention.

Recently finished neurobiology of drug addiction and neuropharmacology classes, in my 4th year of university. My teacher taught us a lot on Koob and Wise's research. One thing I thought was super interesting was that they argued that animal models where rats or monkeys were given unrestricted access to the drug (which I'm pretty sure was always psycho-stimulants) was the only kind of paradigm that showed true addictive behavior. With the implication being that legalization is the human equivalent of that unrestricted access. I'm personally very pro-legalization/taxation etc. because it seems like the best option at this point in time, but how do you feel it will impact addiction therapists? Is that kind of research applicable to drugs such as marijuana? And what do you think about countries like Portugal where all recreational drug use is legal?

[Beyondbeleef](#)

Marijuana is everywhere in the US already. I don't think legalization will change that much.

We need to try to craft the best policies possible, though, to limit the potential harm.

I work in a clinic where we perform cognitive testing (also in Boston - hi, neighbor!) and I have seen many instances of marijuana use exacerbating pre-existing psychiatric conditions. I've also seen it in my own family - I once had to drive my brother to the ER during a psychotic episode after he got high with his friends. He has underlying psychiatric issues.

Those who use medical marijuana are followed by medical professionals who can screen for conditions for which marijuana use would be contraindicated. What are your thoughts on the legalization of recreational marijuana and psychiatric conditions in users, such as bipolar disorder?

[seasteph26](#)

Greetings Bostonian!

I don't think legalization will change much in the way of rate of exacerbation of psychiatric conditions. It's everywhere already.

Do you believe that Marijuana is a gateway drug?

[dhamu\\_92](#)

Not like many think it is. In the US, we think of a gateway relationship as causal: if one uses marijuana at a young age, they will definitely advance to abuse of other, more harmful drugs. That is not a certainty, so I don't think of it as a gateway in that sense.

In Italy a couple of years ago we liberalized gambling and videolottery places, on the ground that it would take it away from the control of criminal organizations, it would bring additional income to the state and that it would make it easier to help those in need.

The outcome has been terrible. Gambled amounts skyrocketed and now statistics are that there are at least 200,000 severe cases of ludopathy and up to 3 million "problematic" ones, out of a population of 60 millions.

Why should we believe that legalizing marijuana wouldn't have the same effects, increasing significantly consumption?

[lucaxx85](#)

The devil is in the details. In the US, marijuana is plentiful, so I don't think use will increase as much as some fear. The outcomes, though, depend in large part on the policies. I think we can make policy that gives adults what they want while limiting risk.

Hello Dr Kevin. I am a general practitioner in Brazil and, in here, the Brazilian Society of Psychiatry made a manifesto positioning itself against the legalization of marijuana on the basis of the increased risk of schizophrenia and anxiety disorder. This opinion is also defended by the American Psychiatry association.

Why do you think that the discussion of the possible negative effects of marijuana in mental health is not the main point of discussion in legalization, as it should be in my opinion? Even people that are against the legalization rarely use this argument and prefer to talk about gateway drugs and driving high, or crime.

Why do you think this discussion is left at the side?

[EILocoS](#)

Greetings! Exacerbation of psychiatric issues is a major concern, for sure. However, I think this issue has not been at the fore because of the prevalence of these disorders. It should play a larger role in the discussion, though.

That's why I'm doing the AMA. Let's elevate the level of discussion on cannabis. Once people know the basics, we can move on to more advanced issues like this one.

Thanks for participating!

Good morning from Cambridge! Could you speak to the impact of marijuana use in young adults with a predisposition to psychotic disorders? I'm a licensed clinician who works with adults with SMI, and I recall from graduate school that there was some research that indicated that heavy marijuana use might increase the severity of psychotic sx, as well as the severity of an episode. This is consistent with what I've seen in the field, but I'd like to know if there is more concrete data than my own anecdotal experience. Thanks, and enjoy this unseasonably warm day.

[roissy\\_37](#)

Heavy marijuana use is associated with increased likelihood of expressing psychotic disorders. Not a causal relationship, though.

Thanks, I intend to get outside later!

Do you believe prison/jailing people with drug addictions actually help them?

[youroriginal](#)

Most of the time, no, because they usually don't get treatment while incarcerated.

Do you believe certain people have "addictive personalities" and if yes does this play any part in marijuana habits? My psych professor in university said there's no such thing as addictive personalities but other researchers disagree so I'm curious where you stand.

[Ghawk21](#)

There is certainly a genetic component to addiction. Is that a personality? Not quite, but genes play a role, for sure.

Hi there and thank you for doing this AMA! Now to my questions:

What do you recommend the age limit for marijuana users, if it were to become legal?

Would it still be illegal to sell it?

I heard that it's impossible to OD on it, is this true? If so, isn't marijuana safer than the toxic substances found in alcohol?

Thank you!

[pussycat316](#)

If voted in, the standard 21 and over seems fine. It would be sold in stores like alcohol is.

The OD issue comes up all the time. Fatal overdose is impossible, but taking too much at once (with an edible, for example) and ending up in an emergency room is possible. That's why people need to be educated about marijuana and the differences between methods of use.

I really appreciate the work you're doing. I'm wondering which argument supporting the continued illegality of cannabis you find to have the most merit, and how/why it would still be more beneficial to change current laws to support recreational use.

And are you running any studies? I'd be a very willing participant.

[zlimK](#)

If you are in the Boston area, we are always recruiting (617 855 2359).

Legalization is complex and great arguments can be made on both sides. The anti-legalization argument that resonates most with me is the driving issue and the inability to effectively test for impairment.

For alcohol, there is a limit (BAC) that define your ability to drive. Do you think that a proven test similar to a breathalyzer would help the legalization of cannabis ?

[LarryBeard](#)

We need a breathalyzer for cannabis impairment and companies are working on it.

The inability to test for cannabis impairment is a major argument against legalization. Colorado draws blood; 5ng/ml is the limit. The problem is that a blood level is not a good proxy for impairment in the same way that BAC is.

Is there way to do a weed breathalyzer like there is for alcohol?

The police here have a method they use but apparently it can't determine if it was used in the last hour or the last day or two. This is clearly problematic as it's clearly fine to drive after a day, but not ok after a few minutes.

Thanks!

[Thread\\_water](#)

There is no breathalyzer available at the moment. This is a major issue for sure.

Marijuana has been mentioned in helping with an abundance of illnesses and conditions. Are there any major misconceptions about the usefulness of marijuana? In other words, what is it not useful for?

[FullMetalGuitarist](#)

See my article in JAMA, June 2015-- I think the link is above. There is good evidence for chronic pain, neuropathic pain, and MS spasticity. Aside from those, the evidence may be lacking.

As someone with cannabinoid hyperemesis, thank you for your work.

[roogug](#)

Thanks for joining the AMA!

In Utah there is a huge stigma against marijuana. [This](#) billboard on I-15 is a prime example. What are your thoughts about the claim here "1 in 6 teens who use marijuana become addicted"? Is there any legitimacy in this statement?

[postre](#)

That is a legitimate statement. However, 5 of 6 teen users don't become addicted. If 6 kids are using marijuana, only one will become addicted, but the problem is that I can't predict which one it will be.

The billboard raises the issue of how to talk to kids-- I treat young people and give talks to them frequently. Kids are smarter than many give them credit for. They know that most who use marijuana don't develop problems. So your ability to get your message across to kids depends on how you do it. Trying to scare them doesn't work.

My friend is a daily user. She suffers from anxiety and feels that her opinions are smoking pot or taking Xanax. She wants to quit, but is fearful of the alternative. Is there a more healthy solution you might recommend which would not create a dependence? Also she believes therapy will not help her.

[bigbrofy](#)

Check out the top of the AMA on my thoughts on treating anxiety.

Has there been any research into methods of determining intoxication from THC in the vein of the breathalyzer for alcohol? I ask because I feel not having a defined metric for measuring intoxication is one of the big obstacles to legalization.

[spekter299](#)

Many people are working on this issue. I agree that is one of the strongest arguments to wait on legalization.

Why do cannabis studies on use and addiction always categorize amount smoked in days per week? Why not amount per day or amount per week? Will we ever see guide lines similar to alcohol's 2 drinks a day.

[Coldsmokechaser8](#)

Big discussion of this above. Grams used is a much better measure than days per week.

You may be waiting awhile for those guidelines, my friend.

I would have loved to have heard the good Dr's views on 12 step recovery programmes. That's a real missed opportunity :(

[telos2](#)

Telos, 12-step works for some. Many swear by it. But it is not the only way to succeed.

Speaking of 12-step, Marijuana Anonymous is excellent.

What's your advice to marijuana addicts?

[hereweg420kush](#)

If you are concerned about your use, never worry alone. There are people who want to help you and treatment can work. I see it every single day.

Hi I am a student in a counseling program and I was wondering what the most effective arguments are that I should use when writing to advocate for medical marijuana use reform in my state?

(we don't have medical yet, so recreational is even further away)

[GZSyphilis](#)

Stick to the data. Advocate for specific regulations (which conditions, what follow-up should look like, etc.).

Hi Dr. Hill? Can you tell us a little about the research being done at Mclean hospital regarding pharmaceutical treatment for marijuana addiction? I seem to remember hearing or seeing studies about treatment that alters the effects of marijuana in a similar manner to Chantix.

[lifeisac0medy](#)

<http://drkevinhill.com/research/>

Feel free to contact us with questions.